

**NEW**



INSIDE HISTORY COLLECTION

# VIKINGS

## Viking legacy lives on in England

Warriors shaped our words, laws and cities

## Norsemen ruled the waves

New ships took the Vikings to victory and faraway lands

## Masters of terror and trade

Vikings raped, pillaged and looted, but above all they were traders

### CHRISTIANITY CONQUERS ALL

Jesus Christ became the rulers' trump card

### LURED BY SILVER

Adventurers hunted for profit and luxuries

### THE DREAM OF VALHALLA

Faith in gods and giants touched every aspect of life









# AGE OF THE NORSEMEN

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When Harald Hardrada took an arrow to the throat near York in 1066, it signalled the end of the Viking Age. Chronicles of the time spoke of how the Norse warriors had plundered, murdered and raped their way through Europe for three centuries. For long years, these ancient texts were our best source of knowledge about the Viking era, but now archaeological finds and studies have painted a more nuanced picture. Thousands of young men may have set out on raids, and powerful chieftains undoubtedly subdued vast areas of land, but the Vikings were first and foremost traders. Their sleek ships ruled the world's oceans, and trading towns sprang up in Scandinavia, where merchants sold goods from all over the known world. The quest for land and luxury drove the Norse further and further east and west, until they had charted the rivers of what is now Russia and landed on the vast continent we would come to know as America.

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## THE VIKING EMPIRE

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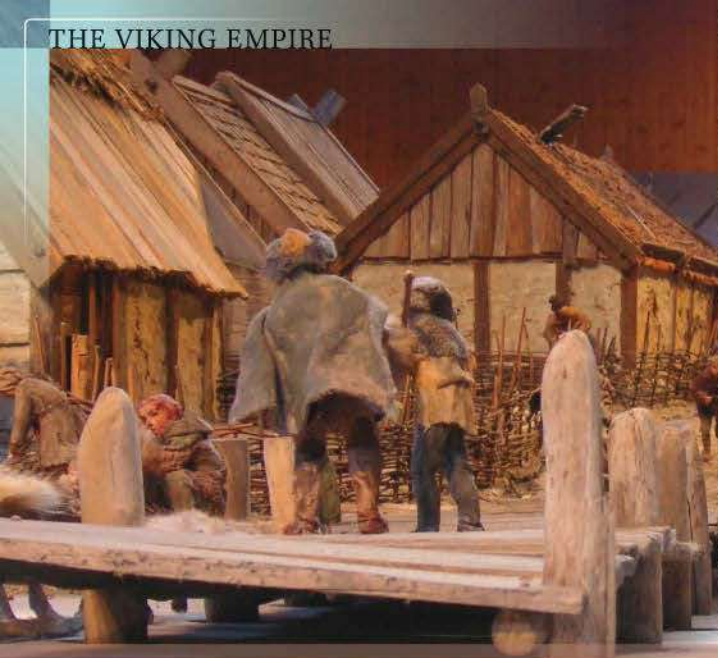
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AD 800 // Birka is founded



829 // Ansgar's missionaries in Sweden



941 // Vikings attack Constantinople



970 // Trade moves to Sigtuna

# SWEDEN

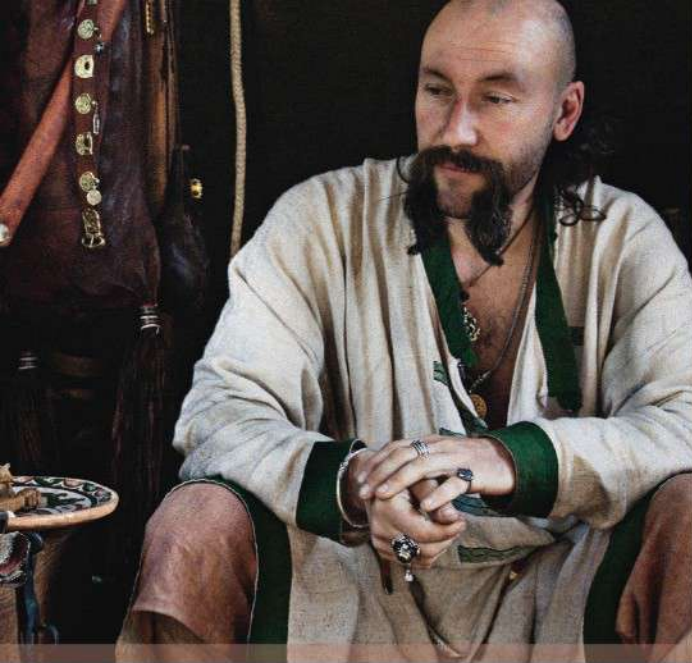
## BIRKA IS FOUNDED

**AD 800** In the early ninth century, Swedish Vikings founded one of the most important trading towns of the time: Birka. Goods are loaded and unloaded from jetties in its harbour, on the island of Björkö, west of Stockholm. The town is a hub for trading slaves and furs from Rus', luxury goods from Byzantium and silver coins from the Arab empires. In the town's workshops, craftsmen make jewellery and craft amber into beads and amulets, which they sell at the big winter markets in February, where the guaranteed snow and ice also ensures that warm luxury slippers are in high demand.

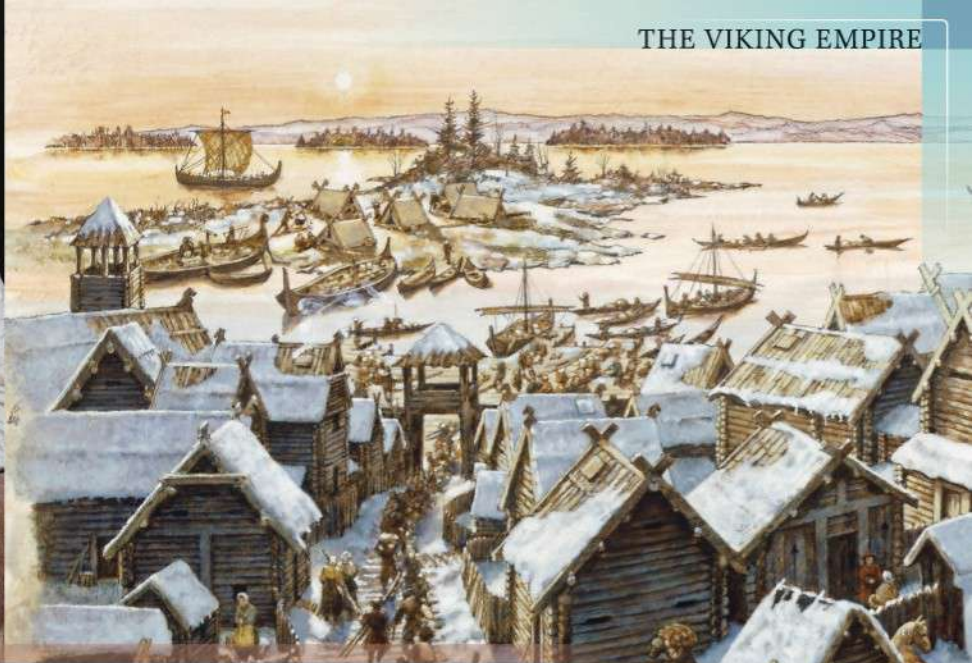
## EMIGRATION EAST

**850** In search of pastures new, Swedish Vikings attack and conquer trading posts along the Volkhov River and around Lake Ladoga, in what is now north-eastern Russia. Slowly they established the *Gardarrike* – the kingdom of the Rus' – that over the following centuries will expand east and south, from Finland's southern border to the Black Sea and deep into Ukraine. In 862, the Viking chieftain Rurik settles in Ladoga before moving his capital further south to a site near Novgorod. The city quickly becomes the Viking capital and a major trading centre, from where, in 907, they first attack and then negotiate a trade treaty with the Byzantine Empire.

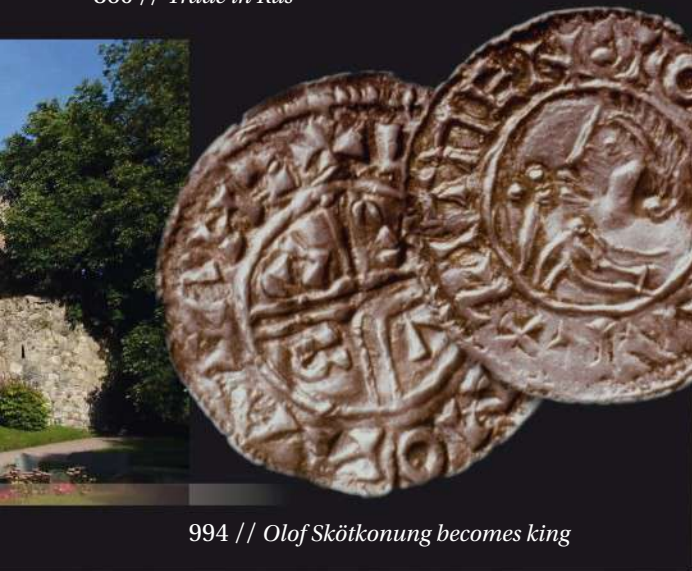




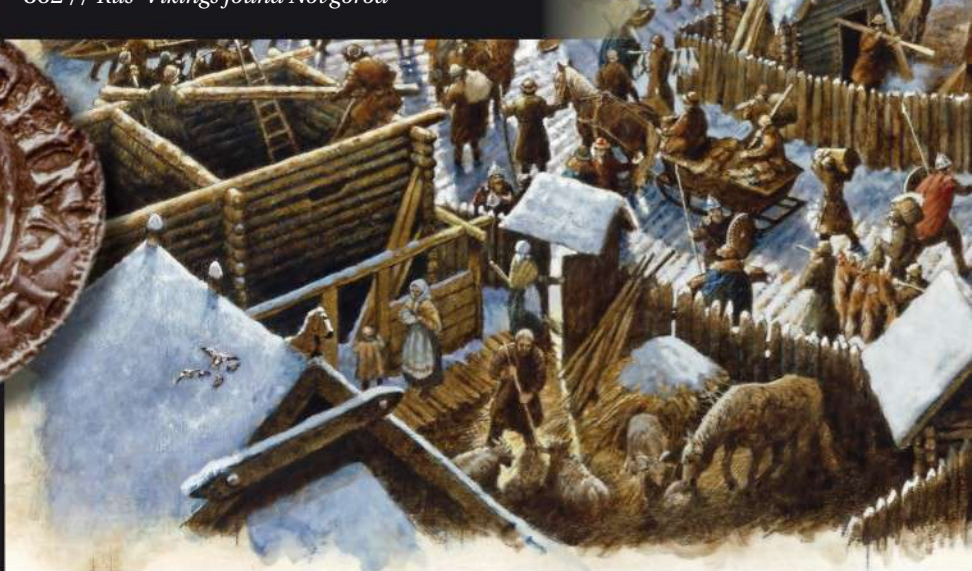
860 // Trade in Rus'



862 // Rus' Vikings found Novgorod



994 // Olof Skötkonung becomes king



## FIRST SWEDISH KING

**994** In 994, the Christian Olof Skötkonung ("Tributary King") becomes Sweden's first king, ruling over both the Goths along the country's west coast and the Swedes who give Sweden its name. Around 995, Olof begins minting coins bearing his name and title, as well as images of Christian crosses, in the trading town of Sigtuna, not far from Birka. Like other Norse kings, he's inspired by the coinage of the English king Æthelred, who is paying huge amounts of silver coins – Danegeld – to the Vikings in an unsuccessful attempt to put an end to their ravaging and plundering of those areas of England not already under direct Danish rule.

## SWEDES BECOME CHRISTIANS >>>>

**1008** The missionary Ansgar, who later becomes Archbishop of Hamburg-Bremen, travels to Sweden and Birka in 829 to preach the new faith. He is allowed to spread the religion and builds the country's first church in Birka, as well as other churches across Sweden. Over the next 200 years or so, Christianity slowly gains ground. The Swedes began to practise completely new rituals and rules of life: they go to church, receive baptism and refrain from worshipping the old gods, having children out of wedlock, and marrying relatives – even distant ones. By the early 12th century, most Swedes have converted to Christianity.





AD 793 // Lindisfarne is plundered



808 // Hedeby is founded



866 // Vikings conquer York

876 // The Danelaw



# DENMARK

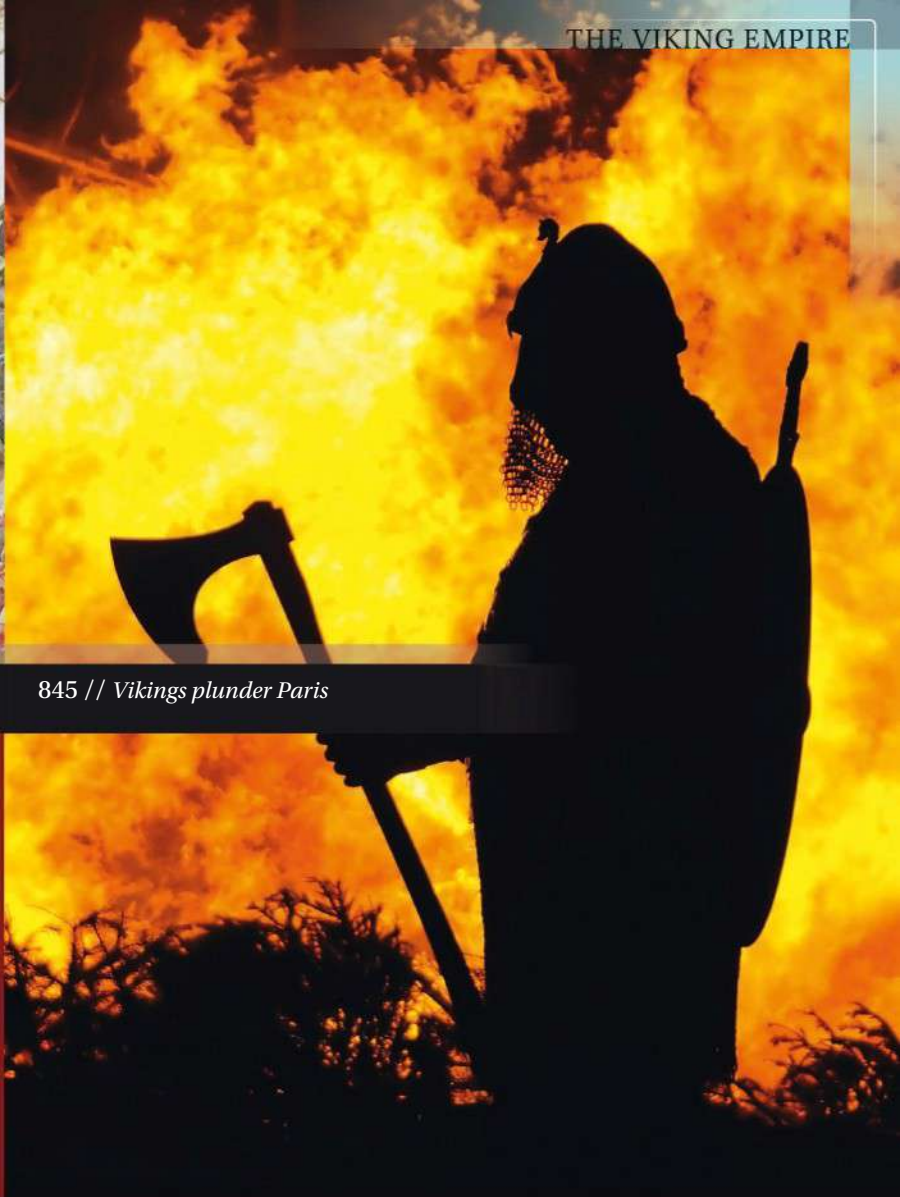
## VIKINGS RAMPAGE

**AD 793** On 8th June 793, Vikings attack the monastery on Lindisfarne, a small island off the Northumbrian coast. The historic attack traditionally marks the beginning of the Viking Age. *The Anglo-Saxon Chronicle* refers to the ravaging pagans as Danes, a term that, like the word Norse, generally refers to all Scandinavians. The earliest Vikings are from Norway, but later Danish Vikings are the primary plunderers of England. After the attack, Christian scholars preach that the English must lead a good life to avoid the divine punishment that must have triggered the Viking attacks.

## TRADE IN HEDEBY

**808** An going threat from the Franks is finally repelled once and for all in 808 when the Danish King Gudfred destroys the Frankish trading post of Reric near the German Baltic city of Wismar. Gudfred moves the merchants 150 kilometres north-west to Hedeby, ideally placed as a hub for Baltic trade and with connections as far as Arabia. From here, Gudfred is able to collect taxes in return for guaranteeing the safety of trade in the Baltic, the North Sea and along European rivers. This helps establish Denmark as the strongest economic power among the three Nordic kingdoms formed during the Viking Age.



826 // *Ansgar preaches in Denmark*845 // *Vikings plunder Paris*958 // *Harald Bluetooth raises the Jelling Stone*

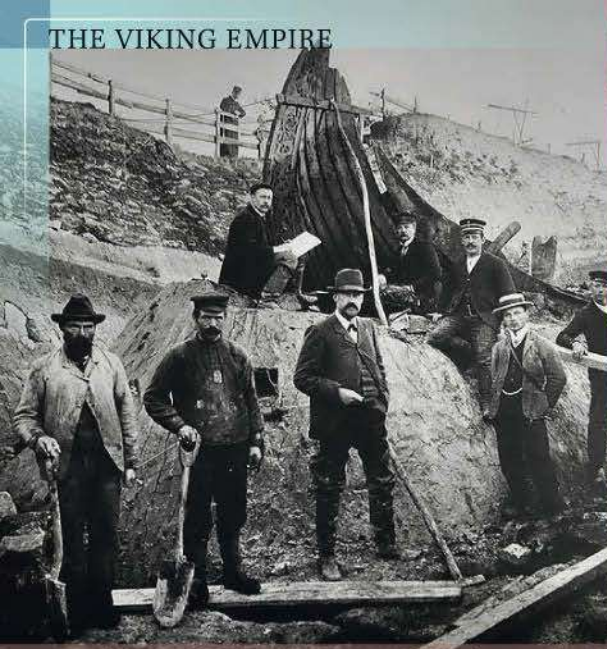
## VIKINGS LEAVE THEIR MARK

**850** The first Vikings initially settle on the islands at the mouth of the Thames, where they spend the winter in 850. Over the next couple of centuries, they establish *Jarvik* (York) as their key stronghold and merchant town in the Danelaw – the Viking-controlled part of England – as well as making it the country's second-largest city with around 15,000 inhabitants. There, they establish their own written laws and courts with juries, which later provide the basis of modern European and American law. The Vikings leave other marks too: place names ending in -by, -thorpe or -thwaite, for example, also bear witness to their presence.

## DANES BECOME CHRISTIANS >>>>

**936** In 936, Gorm the Old becomes King of Denmark. He reinforces the Jutlandic defensive fortress Danevirke. When he dies in 958, his son Harald Bluetooth accedes to the throne and erects the Great Jelling Stone with the inscription, "Harald who won for himself all of Denmark and Norway and made the Danes Christian". This is a slight exaggeration, even though Harald builds a wooden church in Jelling and compels his officials and magnates to convert. Belief in the Norse gods still thrives, and Odin, Thor and Freyja continue to be worshipped for generations. However, most Danes are Christians by around the year 1000.



AD 834 // *The Oseberg ship is buried*870 // *Harald Fairhair becomes King of Norway*874 // *Vikings settle in Iceland*982 // *Erik the Red colonises Greenland*1000 // *Leif Eriksson ("the Lucky") discovers America*

# NORWAY

## NORWAY IS UNITED

**AD 870** At the beginning of the Viking Age, Norway is divided into multiple chiefdoms and petty kingdoms. But in 870, Harald Fairhair, king of Vestfold in Norway, begins to unite the country into a single kingdom. At the Battle of Hafsfjord near Stavanger, he defeats at least eight minor kings from the south-west, including Agder and Telemark. The battle probably takes place around 872 or during the 880s. Harald Fairhair has traditionally been credited with uniting the whole of Norway, but modern historians believe that he only united southernmost Norway and its coastal areas.

## VOYAGES OF DISCOVERY

**870** During a storm in around 860, two ships heading for the Faroe Islands and the Hebrides respectively are knocked off course and arrive in Iceland instead. The Norwegian Ingólfr Arnarson and his brother Leif became the first permanent settlers on the uninhabited island in 870. Around 100 years later, Erik the Red is exiled from Iceland. He voyages to Greenland to set up a colony with an entourage of 25 ships from Iceland, but only 14 ships survive the journey. Around 1000, his son Leif Eriksson ("the Lucky"), follows in his father's footsteps and is credited with discovering Vinland, modern-day North America.



1042 // *King Magnus unites Norway and Denmark*1066 // *Harald Hardrada dies at the Battle of Stamford Bridge*

## BATTLE OF NORWAY

**1000** Norway's king, Olaf Trygvason, rebels against the Danish king, but is defeated by an alliance between Denmark's king Sweyn Forkbeard and the Swedish king Olof Skötkonung. Norway is then left without a king, but after years as a Viking raider, the Norwegian Olaf Haraldsson returns to rule the country, displacing the vassal rulers of Danish king Cnut the Great and becoming King Olaf II. He forcibly converts the Norwegians to Christianity, which later earns him the moniker Olaf the Holy. However, after being deposed in 1028, he is killed in 1030 trying to reclaim the throne in the Battle of Stiklestad near Trondheim.

## VIKINGS LOSE ENGLAND

**1045** Olaf's half-brother Harald Hardrada fights alongside Olaf at Stiklestad when he is 15. In 1045, he returns to Norway with great riches after years of service with the Byzantine Emperor's elite force, the Varangian Guards. Harald is installed as king in 1047 and fights against the Danish king for over 20 years, but gives up attempting to subjugate Denmark in 1064. Instead, he travels to England to fight and defeat King Harold Godwinson in an attempt to claim the English crown, but during the Battle of Stamford Bridge in 1066 is hit by an arrow in the throat and dies. The Viking Age officially ends with his defeat in England.







The background of the page is a detailed illustration. On the left, a tall, grey stone tower stands on a grassy hill. In the foreground, a Viking warrior with a beard and a horned helmet is shown from the chest up, holding a sword. Behind him, another Viking is walking towards the tower, carrying a large wooden crate. A horse is also visible in the scene. The sky is a pale, hazy blue. In the top right corner, there is a faint, stylized map of the British Isles with various regions labeled in Old English script.

# THE FIRST VIKINGS

500-900

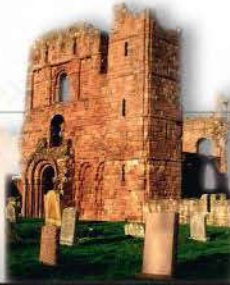
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For centuries, the Scandinavians had been self-sufficient. Fertile farmland, rivers full of fish and forests with plenty of game and timber provided the Scandinavians with all their everyday necessities. But in the eighth century, everything changed. Local chieftains began to desire silver, and soon groups of warlike Norse set out on raids – ready to plunder and ravage their way to riches.



## 500-900

<b>c.500</b> Chieftains begin to rule Scandinavian tribes.	<b>c.700</b> The first distinctive Viking ships are built.	<b>787</b> Norwegian Vikings plunder Portland in England.	<b>793</b> Monastery at Lindisfarne is sacked. Viking Age begins.
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**859**  
Vikings  
ravage Europe,  
from Spain  
to Russia.

500 >>> 700 >>> 787 >>> 793 >>> 859 >>>

One day in the late eighth century, a group of men set sail in sleek ships from western Norway. The longboats went from island to island until they reached the open sea. Then the men set course for the English coast. Everything they dreamed of awaited: monasteries and churches filled with gold and silver, markets overflowing with fine goods, rich men's estates, and glory.

The men came from Hordaland, a province in south-western Norway, and we know about their expedition because it is described in *The Anglo-Saxon Chronicle* – historical annals written by British monks over the centuries. The chronicle describes how the Norse landed on the island of Portland in southern England, where they were met by the king's bailiff, who “would drive them to the king's town; for he knew not what they were”. The royal official, who had probably hoped that the men from the north were peaceful traders, was promptly slain by the strangers, who then plundered and ravaged Portland.

“These,” the chronicle tells us, “were the first ships of the Danish men that sought the land of the English nation.”

Such were the beginnings of the Viking Age, historians believe. In the century to come, Norwegians, Danes and Swedes would spread terror wherever they went.

#### SCANDINAVIA HAD EVERYTHING

The Norse's reputation as the fiercest warriors of the ninth century couldn't have been predicted just a century earlier. At that time, Scandinavia was pretty much

isolated from the rest of the known world. The area was almost entirely surrounded by water: the Atlantic Ocean and North Sea formed natural borders to the west, with the Baltic and Gulf of Bothnia to the east.

Denmark, which at the time stretched as far as the River Eider and also included Skåne in what is now southern Sweden, had large stretches of fertile farmland. Norway was a mountainous country, with peaks covered in perpetual snow and ice. In contrast, the sea along its long coastline

teemed with fish and other sea life, such as whales, seals and – far to the north – walrus. In the forests and mountains, hunters could find reindeer, wolves, bears and elk.

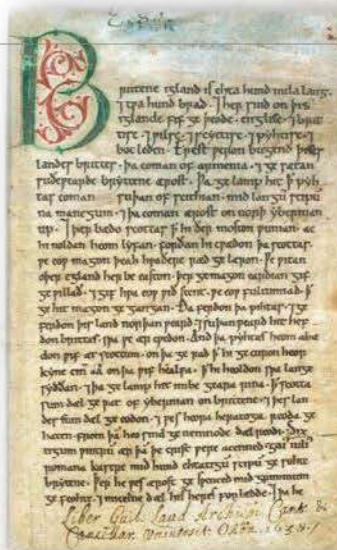
Like Norway, Sweden was mountainous, but around the great lakes of Mälaren, Vänern and Vättern, the land could be farmed. Both Norway and

Sweden also had extensive forests, which provided timber for houses and ships. And since both countries had abundant supplies of iron ore, the Norse could be and largely were self-sufficient.

#### JUTLAND WAS WASTELAND

With the exception of the western part of Norway, most Norse had more than enough land. As late as 1075 – at the end of the Viking Age – the historian Adam of Bremen described Jutland as “scarcely a place fit for human habitation”. Like the rest of Scandinavia, the Danish peninsula was a “wilderness”. The description, like most of Adam of Bremen's writings, is exaggerated, but the fact is that Viking Age farms and villages were small and scattered over great distances. Travel through the

**The first Vikings** were all known as Danes, although they came from Norway, Sweden and Denmark.



The Anglo-Saxon Chronicle described the Viking raids on the British Isles in detail. Only nine original copies of the chronicle still exist, most of them written in Old English.

sparsely populated regions of the Nordic lands was slow but not difficult. The Norse walked, rode or sailed along the thousands of small rivers that cut through Scandinavia. In winter, they crossed the frozen landscape on sledges or skis. Their encounters with each other bound the countries together and gave them something like a common culture. Dress, architecture, art and language were all similar, and outsiders could easily recognise the Norwegians, Swedes and Danes as Scandinavians.

#### EXTENDED FAMILIES LIVED TOGETHER

However, the Scandinavian countries did not exist at the beginning of the Viking Age as we know them today. They were not united as nations, but consisted of small communities ruled by local chieftains, who often called themselves kings. We don't know for sure how the Norse perceived themselves, but all the evidence suggests that individuals saw themselves first and foremost as part of a family, often spanning several generations. It was logical that extended families were close, because they often lived in the same house.

Usually, a whole family clan lived in the longhouse, and around it were smaller buildings used as workshops or homes for servants. These were often pit-houses – simple huts with earthen floors, dug about half a metre into the ground, so that only the roof was visible. This practice helped

#### TECHNOLOGY.....

#### CULTURE.....

#### ECONOMY.....

#### DAILY LIFE.....

### Vikings ate bark and pig trotters

The Viking diet depended on whatever nature and the season had to offer, but the staples were coarse bread and vegetables such as cabbage and peas. The poorest made bread from whatever they had to hand, including dried peas and

bark. Meat could come from game or livestock, and the Vikings were good at using the whole animal. Finds reveal that they ate everything from horse steak and pig trotters to grilled goat. Rich and poor alike drank mead and beer.





# RAIDS BEGAN IN NINTH CENTURY



No one knows why, but towards the end of the eighth century, the Norse started raiding their neighbours in their thousands. Viking warriors initially targeted the riches of monasteries and defenceless trading towns near the coasts.



Viking raids

Early shipping routes



## NORWAY

■ In the eighth century, the Norwegian Vikings lived mainly by fishing and cultivating the sparse farmland along the coast. Historians believe the lack of arable land was one of the main reasons for the Norwegian Viking raids, which led to colonisation in places such as Ireland, Iceland and Greenland.

## SWEDEN

■ Northern Sweden was sparsely populated, but to the south it offered rich and fertile farmland. The Swedish Vikings began their voyages in the mid-ninth century. They went in search of silver and slaves along the rivers of Eastern Europe, colonising large areas.

ATLANTIC OCEAN

## YEAR 793

Viking Age officially begins with the attack on the monastery on Lindisfarne in north-east England.



## YEAR 797

Vikings attack the island of Lambay, north-east of Dublin.



## DENMARK

■ Denmark benefitted from an abundance of fertile soil. Possibly a large surplus population and the lack of opportunity to inherit forced thousands of young men on a quest for land, wealth and women. The Danish Vikings mainly headed west.



**YEAR 859**  
The Chronicle of Nestor first mentions Vikings raiding in the east.

0 300 km

## YEAR 844

The Vikings have plundered all the way down the Atlantic coast and attack in the Mediterranean for the first time. The first victim is Seville in Spain.





## EYEWITNESS

SAINT-VAAST MONASTERY ANNALS / Year 881

## ATTACK ON MONASTERY



“ In the year of our Lord 881, on 26th December, the Northmen entered our monastery with an infinite multitude and set fire to the monastery, town and all the villages in the vicinity, having killed all they could find. They roamed the country as far as the Somme, and took an immense booty of men, cattle and draught animals. At the time of the feast of St Peter, they came again to Arras, killed all they found, and returned unhurt and unmolested to their camp, having ravaged all the surrounding country with iron and fire. ”

and they needed to be – merchants from other lands rarely travelled to eighth-century Scandinavia.

## GERMAN THREAT UNITED DANES

Although Scandinavia looked unchanged in the eighth century, much had happened during the previous 200 years. At that time, family clans ruled only insignificant areas, and no king claimed the lands. Scandinavia was a place where peasants lived peacefully in their settlements. But in the centuries leading up to the Viking Age, various threats forced the Norse to unite under strong men.

Norwegian and Swedish tribes were at war with each other, and to the south invasions from Germany threatened the Danes. To counter the threat, small communities gathered under a magnate, or chieftain, who could provide military and political leadership.

The magnate was a new sight in Scandinavia but his special status soon became visible in the landscape. Finds show that until the sixth century, most houses were the same size – a sign that no one person was dominant over the rest. But by the time the Viking raids began, the building pattern had changed. Most excavations show that a single farm within

the villages was now usually significantly larger than the others. The chieftain's house was also noticeably bigger than the rest and had a huge wooden hall, which could be used for feasts, ceremonies and demonstrations of power.

## SOLDIERS PAID IN GOLD

Historians know that the powerful magnates of the eighth century did not just demonstrate their power with impressive houses. They also owned land and could afford to hire warriors to defend or expand their territory.

It was these growing armies that were to be crucial to the Viking raids. To pay their warriors and maintain an adequate standard of living, the chieftains increasingly sought gold, silver and jewellery, which served as an effective means of paying their warriors. Historians believe that even before the Viking Age, Norwegians sailed to the British Isles. The longship, developed around the eighth century, could easily cross the narrow waters between the west coast of Norway and the Shetland Islands. If the wind was right, the journey took about 24 hours, and from Shetland an experienced Viking captain could easily sail on to Orkney. On the islands, the

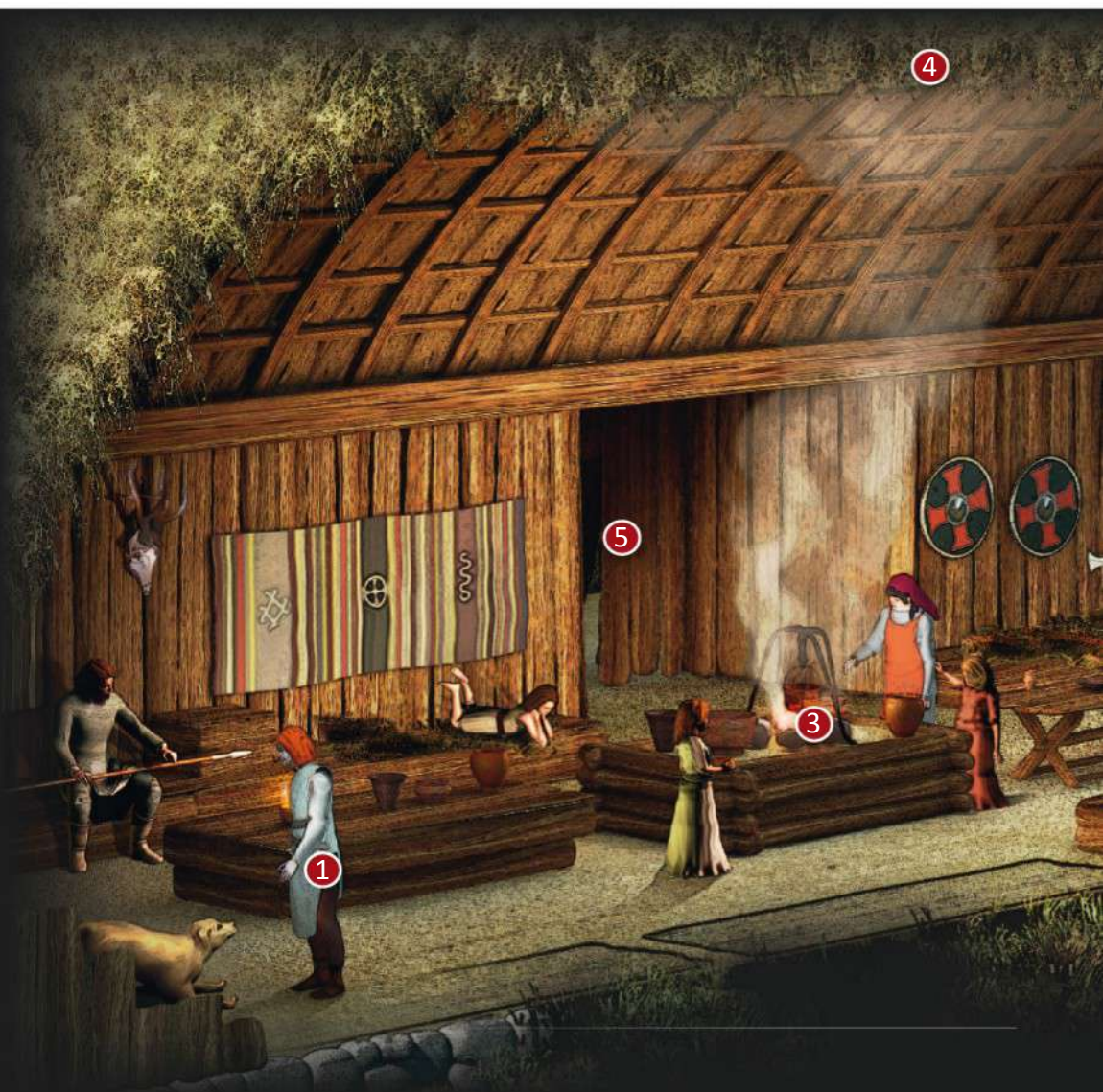
**Twelve** was the age children became adults, according to Cnut the Great's laws from the 11th century.

>>>> insulate the houses in winter. Inside the pit-houses, people made tools for men and servants to use in the fields, weapons for hunting and fishing, as well as bowls, buckets, chests, axes and ladles. The women wove clothing from wool from the family's own sheep. So, the farms were self-sufficient

## LONGHOUSE WAS FULL OF LIFE

*Up to 100 people lived side by side with livestock in the dark rooms of the longhouse.*

■ Viking longhouses were the centre of family life. Several generations lived there, together with servants and livestock, and much of the Scandinavian winter was spent telling stories, playing board games, carving and talking in the longhouse, which consisted of a single room. Even for the wealthiest, life in the longhouse was spartan. The floor was pounded earth and strewn with hay or straw. Along the walls, the inhabitants shovelled small mounds of earth and encased them with timber. These low benches served as seats and beds, where the wood acted as insulation from the cold ground. Many also had low stools, which together with blankets, skins and chests were the only furnishings in the houses. However, the Norse largely sat on the floor or the surrounding benches while they ate or listened to the tales told by family elders.





# “Finds show that until the sixth century, most houses were the same size”

Norwegians traded with the locals and then returned home.

## FORTUNE SEEKERS SET OFF

For the Norse chieftains, now powerful enough to build ships and hire men for longer voyages, the temptation of an easy income became irresistible. The Vikings began sailing out to take by force the goods for which they had previously had to pay or barter. So, around the year 800, they turned their gaze westwards. There, trading centres flourished all along the Atlantic coast of the continent, and merchants flocked to towns such as Quentovic, near Boulogne in what is now France, Dorestad in the Netherlands, and Dorchester, the town the men of Hordaland sacked. The first voyages followed familiar routes. The men of Hordaland probably came

by way of the Shetland and Orkney Islands. From there to the northern tip of Scotland, the sea route was short and the journey straightforward. For the Norwegian Vikings, it proved surprisingly easy to navigate along the coast of England, which was similar to Norway's, with bays and islets where ships could take shelter for the night or during bad weather.

Historians believe that the first major attacks came by sea from Norway via the Shetland Islands. These include the famous attack on Lindisfarne Abbey in Northumbria, north-east England. There, in 793, according to *The Anglo-Saxon Chronicle*, “Dire portents appeared ... and sorely frightened the people. They consisted of immense whirlwinds and flashes of lightning, and fiery dragons were seen flying in the air. ... [A] little after that

in the same year, on 8th June, the ravages of heathen men miserably destroyed God's church on Lindisfarne, with plunder and slaughter.” With its precise dating, the account in the chronicle has gone down in history as the first documented Viking attack. Holy men – including the monk Alcuin of York, who after Lindisfarne wrote of the Viking rampages and attacks on “a place more venerable than all in Britain” – warned that the events were God's punishment.

## AROUND SCOTLAND

By 795, the Vikings had reached all the way around Scotland and down to the Isle of Iona, home of the monastery of St Columba, which housed one of Europe's finest scriptoriums.

The Vikings weren't concerned about the fact that they were invading a holy

*In workshops near the longhouse, Vikings carved elaborate wooden figures, among other things.*



- ① Often several families lived together in a single longhouse. The family's servants also lived in the building, usually at one end, with the farm animals.
- ② The family slept on carpeted benches or raised areas along the walls of the house.
- ③ Women and servants prepared meals around the fireplace. It was often porridge in the morning and meat in the evening.
- ④ The hole in the ceiling ensured that most smoke rose into the air, while daylight could still get in. Windows only became common after the Viking Age.
- ⑤ The longhouse usually only had one door. By omitting windows and additional doors, the Vikings ensured that heat loss was kept to a minimum.
- ⑥ Lamps fuelled by fish and whale oil gave a pleasant, soft light and produced surprisingly little smoke.
- ⑦ The family's cows and goats lived in one end of the house during the winter months. The animals helped warm the longhouse.



“Like Scandinavia, other countries were divided into small kingdoms in the ninth century, each with its own king, who was constantly warring with his neighbours”

>>> place, and they wanted neither the monks nor the church's possessions. The gold and silver in British monasteries tended to be limited to small decorations on books and altars. But the monasteries – especially in areas away from towns – functioned as local centres of power, with rich people living nearby. There the Vikings could find gold and silver in abundance.

#### ALLIANCES MADE

Like Scandinavia, other countries, such as Ireland, were divided into a number of small kingdoms in the ninth century, each with its own king, who was constantly warring with his neighbours. As monasteries were in close contact with local rulers, they quickly became parties to the

conflicts, and the monasteries were attacked, monks assaulted, and buildings set on fire countless times by local warriors or rival monasteries. The Vikings learned to exploit the internal strife by allying themselves with one or other great lord or attacking under the cover of other groups' assaults.

The Norse used the same tactics on the European continent, where a Viking fleet attacked St Philibert's monastery on the island

of Noirmoutier in the Loire estuary in 799. A few years later, King Gudfred, the Danes' most powerful chieftain, launched an attack on Frisia on the north-west coast of the Frankish Empire. The ambitious Gudfred had amassed a fleet of 200 ships, according to the *Frankish Annals*. The number was probably lower, but Gudfred managed both to plunder Frisia and capture 100 lb (around 45 kg) of silver in taxes. After the attack, Gudfred was killed by one of his own men, and his successor made peace with the Frankish King Charlemagne.

#### ATLANTIC WALL SLOWED VIKINGS

The plundering along the mainland's rivers and coasts did not really get underway until after 814 – the year Charlemagne died. During his reign, the king had conquered large areas of land. At its largest, the Frankish Empire included modern-day France, Germany, Italy and the Netherlands, and Charlemagne had kept a watchful eye on the threat from the Norse, building defences – a kind of Atlantic Wall of the day – along the northern coast of the Frankish Empire to protect the entrance to the Seine from pirates who “infest the Gallic sea”. After Charlemagne's death, however, the Frankish Empire fell apart and was

Every autumn the Viking raids ended and the warriors returned to their farms to help with the harvest.





divided between three of his grandsons: Lothair I, Louis the German and Charles the Bald. The division of the empire meant that Charles's coastal defences were greatly weakened – a problem not helped by the fact that the three brothers were more concerned with fighting among themselves than with securing the empire against Vikings. The result was that the Norse slowly but surely pushed their way up rivers, targeting France's wealthy monasteries, trading posts and towns as easy victims.

### WARRIORS TOOK PARIS

The Vikings found lots of targets, because the Frankish Empire was overflowing with riches. The church had close ties to the royal family, and monasteries and church buildings were filled with precious altar goods, relics and gilded books. The French upper classes were also rich – especially in

silver, which the king used to pay for the building of towns, roads, ports and monasteries, and to reward his mercenaries.

According to the *Frankish Annals*, the Vikings first got lucky in Aquitaine – a region in south-west France. According to the annals, 13 ships sailed there and left again with a large booty. Then they went on to other towns, monasteries and trading centres. In the 830s, the Vikings repeatedly plundered Dorestad – one of northern Europe's largest trading centres. In 843, Nantes on the Loire was sacked on St John's Day, when large crowds gathered to celebrate at the market.

Historians believe the raid was orchestrated by a count who, in the wake of Charlemagne's death, saw a chance to overthrow Charles the Bald, who ruled the area, and take Nantes for himself.

This would not be the last time the Vikings came up against Charles the Bald. Two years later, a large Viking fleet sailed along the Seine to Paris. Even the fortified centre, Île de la Cité, where Notre Dame Cathedral now stands, was captured and ravaged, and Charles the Bald had to hand over 7,000 lb (3,200 kg) of silver to make the Vikings retreat.

### MOORS CHASED OFF MARAUDERS

However, the Vikings gained little benefit from the raid, as most of the warriors on board the fleet were struck by illness and died on the way home. The misfortune did not stop the Vikings, however, who ventured further and further from home. In 844, a Viking fleet reached Spain, where they captured the city of Seville. They were chased out by the ruling Moors, but more voyages to Spain followed. The chieftains Björn Ironside and Hastein, whose exploits are recounted in Arabic accounts and elsewhere, were among the most travelled. According to sources, in 859 they sailed on a three-year expedition to Spain, North Africa, the Rhone Valley and Italy. On the

The Vikings went in search of silver, which they didn't have in Scandinavia. The metal was used for jewellery and as a means of payment.

way, they took many prisoners and a great deal of booty.

Apparently, the two Vikings and their entourage also entered the north Italian city of Luna, believing they'd reached Rome. The story of the mistake is unlikely to be true, but the amusing anecdote probably helped to reinforce the chieftains' status as celebrities in the Viking community.

### BODIES EVERYWHERE

Less entertaining was the plundering and raiding of the general population. The cities of Cologne and Trier were burnt down, and the same fate befell many other towns and monasteries along the Rhine. In Zutphen, in what is now the Netherlands, the Vikings murdered the inhabitants and even the livestock in the ninth century. Archaeologists have found the skulls and hooves of cows, showing that the Vikings took only the meatiest parts of the animals.

Historians also found human bones, including the skeletons of a woman and a child of about 12 years old. Both had been murdered and left in a hut, which was then burned. The tactic was deliberate. The Vikings knew that the more brutal they were, the easier it would be to make their opponents surrender without a fight. And no one was spared during the Viking raids, especially not the town of Saint-Vaast in northern France.

"The corpses of clerics, laymen, nobles, women, young people and children were lying on every road. There was no road or place in which the dead did not die," reported the annals of the Benedictine monastery in the town, which was brutally ravaged by the Vikings in the 880s.

"Everywhere the Christians are victims of massacres, burnings, plunderings: the Vikings conquer all in their path," the monk Ermentarius of Noirmoutier complained in the 860s. Ermentarius need not have despaired – in the tenth century, the Frankish Empire regained its strength and the wave of Viking raids became a trickle of solitary sorties. But the monk had been right: the Vikings were unstoppable. The warriors had only just begun their onslaught of invasion and expansion that was to characterise the coming age. The raids had laid the foundations for the Viking Age. The next 250 years would be dominated by the Norse. ■











# SHIP BUILDERS

700-1060

With the arrival of autumn in Scandinavia, specialised craftsmen started the search for suitable lengths of timber. Large areas of forest were felled to provide wood so Viking engineers could build their most important invention: the longship.

Throughout the winter, artisans chopped and planed the wood to form planks, keels and masts before slowly assembling the longships like a giant jigsaw puzzle. By early spring, the shipbuilders could finally hoist the ships' sails and send yet more vessels on their way along Europe's rivers or across the Atlantic.



## 700-1060

**700** Viking shipbuilders start adding keels to their ships.

**793** Vikings attack the monastery on the island of Lindisfarne.

**834** Viking woman Åsa Haraldsdottir is buried in the Oseberg ship.

**1000** The *knarr* gains ground as a Viking trading vessel.

**1042** The warship *Skuldelev 2* is built in Dublin.

**1060** Vikings in Roskilde sink ships to seal off the fjord.

700 >>> 793 >>> 834 >>> 1000 >>> 1042 >>> 1060 >>>

The monk Alcuin, a brother from the island monastery of Lindisfarne, was stunned. He had never believed that “such an incursion from the sea could be made”. The year was 793, and a band of Vikings had just sailed unseen along England’s coast and sacked the remote religious house in a brutal, lightning attack.

Before the Norsemen arrived, Lindisfarne’s inhabitants had felt secure, believing that the sea would protect them from any enemies. And even if an enemy did attack the island, the community reckoned that they would have ample time to arrange a defence before their attackers could dock and put their weapons ashore.

The Vikings, however, struck quickly and without warning. They stormed up the beach with axes held high and headed straight for the monastery. Before the terrified brothers could lift a hand to help themselves, the Vikings had looted the settlement of its treasure and set sail again in their sleek longships.

#### BUILT FOR LIGHTNING RAIDS

Lindisfarne’s fate was far from unique. The Vikings’ ships brought success everywhere. The boats carried the men to their victims quickly and safely transported them and their booty back to their homeland. Viking warships were designed to sail close to shore and land on beaches. They were also ideal getaway vehicles when the raiders wanted to return to the sea. But they were just one example of the Scandinavians’ fine

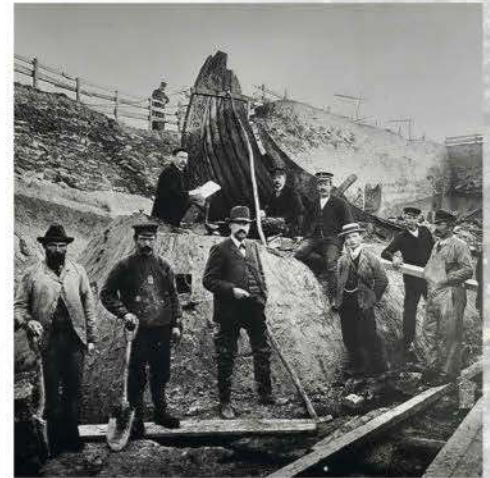
shipbuilding skills, which had been refined for generations and included vessels adapted for traders, explorers and fishermen. Boats offered great men power and were part of the Vikings’ daily survival; they supported the Norse people from the moment of their birth and, for some, accompanied them on their final voyage. Mighty men and women were laid to rest on ships, including the Norwegian Queen Åsa Haraldsdottir, who was discovered on the Oseberg ship in a burial mound.

**Kvalsund II** is the first known Viking ship with a keel. The 18-metre-long boat was built around 700 AD.

#### SHAPED FOR WATERWAYS

The Viking ship’s flat-bottomed, supple construction suited Scandinavia’s numerous waterways, transforming the sea from a barrier to a bridge between the Norse people. For centuries, small boats had carried the Scandinavians along rivers and streams, and through sounds, lakes and shallow fjords. But Norse ships couldn’t cross the open sea before the eighth century. Earlier vessels were crudely built with a few long, thick planks, which made them heavy and stiff. The ship’s bottom was too weak to support a mast with sails. Iron Age and Bronze Age sailors were forced to use oars instead.

However, Viking shipbuilders eventually overcame these problems. Around AD 700, they developed a technique for riveting together shorter planks with iron nails and wooden pegs. This clinker form of construction made the ship’s hull more flexible, and the vessel became considerably lighter, enabling the crew to pull it up on to a beach and even carry it for short distances



The Oseberg ship, excavated by archaeologists in 1904-1905 in Vestfold, Norway, turned out to be the tomb of the Viking Queen Åsa Haraldsdottir.

over land. At the same time, the Norse replaced the plank that had previously served as a keel with a more solid piece of wood that stabilised the ship and provided a sturdy base for a mast with a mainsail.

The introduction of the sail revolutionised travel in the Nordic world by significantly shortening journey times. Until then, oarsmen had only been able to propel ships at five knots per hour at most, but with wind power, vessels could race along at 17 knots per hour, reaching the British Isles from Scandinavia in just a few days. The sail also saved the crews a lot of effort, which meant they had more energy for raiding. The Vikings’ new sea-going longships could also sail faster than the French and British competitors of the time and were far more manoeuvrable.

#### BOAT-BUILDING SPECIALISTS

The Vikings’ dependence on their vessels made boatbuilders highly respected within their society. They were a specialised workforce with great responsibility. Writer Snorri Sturluson’s Icelandic saga of the Norwegian King Olaf Trygvason is one of the best sources of knowledge about boatbuilders of the era because it includes a description of the construction of the 43-metre-long warship known as *Ormen Lange*, which has never been found.

According to the saga, the shipbuilders were organised hierarchically, with the master builder, the *hofudsmidir*, at the top. He was responsible for the entire process, from the first tree being felled to the ship being launched. He also sourced the boatbuilders’ supplies. Skilled master builders were in great demand and often travelled between different fiefdoms selling their skills. Below the master builder was the foreman, who directed the day-to-day work in the workshops and boatyard. Foremen were also much in demand and went from site to site with a toolbox in hand. A master builder could manage the work on smaller sites without a foreman.

The first thing master builders did after being commissioned was set specialist

#### MEANWHILE IN CHINA

#### WATERTIGHT BULKHEADS WERE ADDED TO JUNK VESSELS

While the Vikings were building ocean-going longships, the Chinese were refining the junk – a flat-bottomed keelless sailing ship that Chinese sailors had been using since the second century. During the Song Dynasty (960-1279), the junk was fitted with watertight bulkheads that divided the ship’s hold into smaller compartments. The invention meant that if the junk took on water, the damage was limited to a single section of the ship’s hold. Watertight bulkheads were not introduced to European vessels until centuries later.





# “They stormed up the beach with axes held high and headed straight for the monastery”

lumberjacks to work finding the best timber for the vessel. The Vikings usually used oak for hulls, keels and planks, and a large Viking ship required about 15 large oak trees. They used other wood for the mast, yardarm, oars and barrels.

Lone oak trees with slightly curved branches were suitable for the ship's ribs, bow and stern. A thick trunk with one strong, perpendicular branch was perfect for the keelson – the supporting beam that lay lengthwise in the bottom of the ship to strengthen the keel and support the mast. On the other hand, long, straight trunks were suitable for the ship's sides, bottom and decking.

Once the trees had shed the last of their autumn leaves, the Viking logging season began. The bare forest gave the loggers a clear view of the shape of the trunks and revealed any flaws. Transporting the trunks from the forest to the boatyard was also more manageable when the undergrowth had died back. Additionally, the fresh timber was less likely to dry out and crack as the temperature dropped.

## PRESERVED IN A BOG

Once the timber was at the yard, shipbuilders known as *filungar* immediately started splitting the trees into planks. The fresh and still-wet trunks were soft and pliable, making them easy to work with and giving them their Viking name: butter oak. By comparison, hard, tough wood from a dried-out oak trunk was called bone oak. The Vikings eschewed the use of saws for splitting logs because their teeth tore the wood fibres apart, weakening the material. Instead, boatbuilders drove wedges of either wood or metal into the logs. Once the wedges had done their work, the wood was chopped through with an axe. The

boatbuilders split the trunk in two and then into quarters, then split it again until the planks were the correct size. A thick oak trunk would supply around 16 planks. Even thin oak planks were strong enough to form the hull of a sizeable clinker-built longship. For example, the bottom planks of the Gokstad ship – a 24-metre longship from the late 800s, found in Gokstad in Norway – are only 2.6 centimetres thick.

Smaller pieces of wood, cut off in the processing of the logs, were rarely wasted. Shipbuilders cut them into small items such as nails or blocks for ropes or used them as scaffolding during construction. The bast

The Old Norse word *dreki* means dragon ship and refers to the figurehead on the bow.







fibres, just below the bark, were twisted into rope, while the chips were passed on to households where they could be used as firewood or to smoke fish, cheese and meat. Good logs that were not yet needed were preserved in a local bog for future construction, which kept them strong and supple.

#### SKILLS PASSED ON

Boatbuilding was both laborious and time-consuming. Modern museologists have learned from building replicas of Viking ships that it takes more than a week for a single man to cleave, rough-hew and fit a single plank. A large longship was pieced together from around 90 planks and probably required 28,000 hours of work, meaning a shipbuilder with a crew of 10 would have spent more than seven months completing each vessel.

Viking boatbuilders had no drawn plans but worked according to traditions passed

down from generation to generation. They built vessels by eye with few measuring tools. Historians believe shipbuilders simply used sticks and string to mark the vessels' lines. They may also have used measuring sticks with lines to mark up the ship's planks.

While the boatbuilders did the work of laying the keel, the master builder was always present to ensure they did the job correctly – a misplaced keel could ruin the rest of the ship. The keel consisted of three pieces of wood – a long one in the middle and two shorter ones at each end. The planks for the keel were cut from the best logs so that unevenness and old frost damage would not weaken the ship's structure at its most important and vulnerable point.

#### FLEXIBLE CONSTRUCTION

From the keel, the boatbuilders worked their way up, fitting the ship's sides plank

**15 knots,**  
equivalent to  
28 km/h, was  
the typical top  
speed of Viking  
longships.

by plank. The Vikings developed different kinds of drills to make holes for nails. Each composite length of wood running from bow to stern was riveted together, and the overlaps were secured with three nails and iron rivet rings. The overlaps also had to be staggered to avoid weak points in the hull. This riveting technique, which is still used in Nordic boatbuilding today, ensured that the Vikings had light, flexible longships.

After the sides were fitted, the boatbuilders lashed the ship's ribs – its framework – into the hull. The ribs were cut from curved branches, which had to be flexible enough to twist on high seas without breaking. The boatbuilders steamed the wood for the framework by soaking it in water and then heating it over the fire. This process allowed it to be shaped during the boat's construction. The ribs supported the bottom planks, and large longships were often reinforced with extra spars. Throughout this work, the bowman ensured that the structure remained strictly symmetrical.

The boatbuilders continued to build the ship's sides up to the expected waterline before laying the keelson and transverse beams on which the deck planks rested. The remaining planks were added, and the craftsmen made holes for the oars. A fixed steering oar was then attached to the upper board on the right of the ship's stern.

#### TAR SEALED THE SHIP

The boatbuilders smeared several layers of tar over the structure to prevent water from rotting the timbers. They also used ropes dipped in tar to seal the ship's sides.

While the Vikings produced most of the tar themselves, they also imported it from



Since the discovery of the Gokstad ship in 1880, museum staff have reconstructed Viking vessels. Here, a boatbuilder is working on a replica of the Skuldelev 6 fishing boat, originally built in 1030.



Boatbuilding began in the autumn so that the finished ships could be launched for the raiding season in early summer.



regions with extensive pine forests. Tar makers built a pile of pine wood in a special pit known as a kiln. They then covered this structure with a 10-centimetre-thick layer of peat and turf stuffed with as many plants as possible – blueberries, cranberries, moss and heather – to help retain moisture. Then they set fire to the wood. The heat drove the red-gold sap out of the pine and turned the resin into tar, which could be tapped after a few days and put into barrels. The freshly made, fragrant tar also contained water that could be poured off after a week.

Tar production required enormous quantities of wood: modern experiments show that 60 cubic metres of split pine roots yield 1,000 litres of tar using Viking techniques. Moreover, the process required up to 8,000 working hours.

#### SIZE DETERMINED SHIP TYPE

Once the tarred ship was painted, it was ready to be launched. The master builder and his crew always watched this event with great excitement, for it was their first chance to see whether the ship was holding tight and lying well in the water. The flat-bottomed Viking ships were designed so that the waterline was close to the gunwale, so it had to be well balanced to avoid taking on water in high seas.

If everything was in order, the boatbuilders raised the mast and prepared the oars. The Vikings categorised their

ships according to the number of rowers the vessels could accommodate, which was dependent on the number of spaces – referred to as *rúm* (rooms) – between the boat's ribs. A smaller boat, with six spaces, could take six pairs of oars and was called a six-room by the Norse. A boat with 12 pairs of oars was known as a 12-room, while the smallest longship, which had 16 pairs of oars, was called a *karfi* – the Gokstad vessel fitted this category. Larger warships with room for 40 oarsmen or more were called *snekkja*, and the largest, with more than 60 rowers, were known as *skeids*.

With the mast and oars in place, the boatbuilders now laid the deck planks and brought sails, ropes and equipment, such as anchors and water barrels, on board. An iron anchor could be up to a metre long and was an expensive part of the ship's equipment. It was constructed in a forge attached to the boatyard. The blacksmith was also responsible for maintaining the builders' tools and making small iron items for the ship's structure.

#### FOUR HUNDRED HORSE TAILS

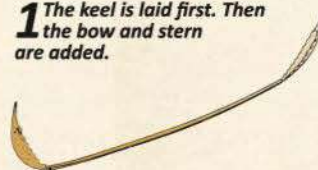
Near the forge was the workshop where both men and women wove the vessel's sails. Archaeologists don't know precisely when the Norse introduced sails to their

## SHIPBUILDING

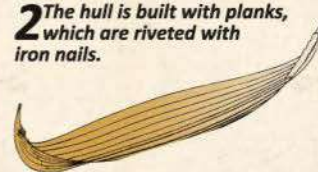
### BUILDERS PASSED ON KNOWLEDGE

Vikings built their ships according to a design passed down through the generations. Building a single ship – from felling the oak trees to setting the sail – took more than half a year. The result was a fast, sturdy ship that could cross oceans and sail up shallow rivers.

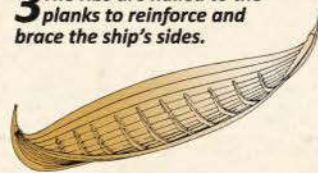
**1** The keel is laid first. Then the bow and stern are added.



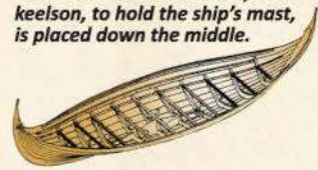
**2** The hull is built with planks, which are riveted with iron nails.



**3** The ribs are nailed to the planks to reinforce and brace the ship's sides.



**4** Cross beams are fixed between the ribs. Next, the keelson, to hold the ship's mast, is placed down the middle.



**5** The finished hull is fitted with a mast, sail, rudder and rigging. Finally, the whole ship is coated in tar.





vessels. Because of the perishable nature of the materials, any remains are extremely rare, but carved stones from the eighth century found in Gotland, Sweden, carry images of Viking ships rigged for sailing.

Norse vessels at this time employed a single square sail. The warship *Skuldelev 2* – a longship of 29.4 metres found in Denmark's Roskilde Fjord – carried a sail of around 110 square metres. The forces of nature on the open sea demanded durable material. The Vikings wove the ships' sails from flax or coarse wool dyed with precious red, yellow, blue or black pigment. Sailmakers often double-layered the fabric before reinforcing it with leather straps and ropes across the sail.

Rope was also fashioned at the boatyard. Workers twisted the ship's ropes from horse tail hair and bast, as well hemp and hides from walrus, whale and seal. For a ship like *Skuldelev 2*, the ropemakers would have used about 400 horse tails and 400 kilograms of bast.

#### SLEEPING BAGS

Life at sea in Scandinavia's changing wind, weather and currents required sturdy ships and hardy seafarers. The crew – up to 100 men –

## “The crew – up to 100 men – lived tightly packed in an open boat”

lived tightly packed together in an open boat, under a baking sun or in the biting cold, with no possibility of privacy.

The Vikings brought along two-man sleeping bags to keep warm on the cold nights. These *húdfat* were sewn together from two pieces of animal skin, while the *sørya* sleeping bag was woven from fine wool and easier to dry than skin when wet.

The crew's luggage was stowed in wooden ship chests along with provisions and weapons. Both archaeological finds and Icelandic sagas testify that the sailors brought along various board games to pass the time at sea – for example, chess and the Viking games of *hnefatafl* and *nefatafl*, with pieces and dice made from bone, tooth and glass, were popular.

Ancient legal texts reveal that the crew had to bring their own weapons on raids. On smaller warships, the law required that each warrior carried a broadaxe, sword, spear and shield, while peasants had to be equipped with bows and a full quiver.

The same texts also document the different tasks allotted to crew members. For example, the Norwegian Gulathing Law Code stated that private seamen called *holumenn* – often young, unmarried men – were selected by the mate and were part of a fixed roster at the oars, sail and helm. They also acted as lookouts on the mast. The ship's cook, the *matsveina*, had to be put ashore three times a

day when the ship was near land to fetch clean water and fresh ingredients so that he could provide hot meals for the crew. The menu was usually porridge, butter and dried meat or fish. This was a change from early Viking times, when, according to the *Eyrbyggja Saga*, the sailors drew lots for the job of finding the day's fresh food.

#### SEA CHART SHOWED THE WAY

The skipper had overall responsibility for the ship and the voyage. But the task of steering the ship over great distances while at sea probably required the combined

knowledge and expertise of all the sailors, because the Vikings only had a limited number of primitive navigational tools at their disposal.

Finds show that the Norse used a kind of carved sea map to guide them around cliffs and rocky headlands along particularly difficult stretches

of coast. They probably also made use of a pole or lead plumb line to measure water depth. And they may have navigated with a solar compass, which enabled them to determine the ship's course by reading the position of a shadow on a round disc. Sagas also tell of a sunstone that could determine their position even when there was dense cloud cover, but archaeologists have never managed to unearth an example of such an instrument.

In addition, Norse skippers passed on descriptions of sea routes to one another. One Viking account of how to navigate from Norway to Greenland finally made its way into a 14th-century sailing text:

“Leaving Hernum [a set of islands near Bergen in Norway] going towards the west to Hvarfin [now Cape Desolation] ... one goes north round Hjatland [the Shetland Islands], one could just see the land, thereafter south round the Faroe islands, so that one saw half the height of the mountains, to the south round Iceland, so that [its] sea birds and whales could be seen.”

First and foremost, however, the Vikings navigated by their senses and observations of the natural world. By day, they used the sun's arc across the sky; the stars showed the way at night. The Norse used the North

**The Vikings** probably took skalds on board to entertain the sailors when they went on long voyages.

Around the year 900, a Norwegian Viking carved the outline of a Viking ship into a stick.



# SAILS POWERED THE VIKINGS' VOYAGES

*Before the Viking Age, the Norse relied on oarsmen to fight their way across seas and fjords. Viking shipbuilding innovations such as the keelson enabled the Vikings to raise a mast and hoist sails, which increased sailing speeds and took the Vikings further afield.*

## SAIL

The Vikings wove sails from wool and flax. Women made long lengths of cloth, which were then sewn together and treated with a mixture of raw ochre, horse mane fat and tar. The combination made the sail smooth, windproof and water-repellent. Warships' sails were often yellow; merchant ships tended to have plain-coloured sails.

## ROPES

Rigging rope was usually made of horsehair or bast fibre. Horses' tails were water-repellent and, therefore, suitable for ropes that often got wet. The Vikings also imported walrus skins, which the ropemakers cut into strips and twisted into strong ropes.



## PLANKS

Viking ships were clinker-built, meaning that the ship's sides and bottom planks consisted of several pieces of wood that overlapped each other. The advantage of clinker construction was that the boatbuilder could use thin planks, making the ship lighter. It took about 90 planks to build a large Viking ship.

## DECK PLANKS

The planks could be removed to allow the crew to store provisions and goods underneath. The Vikings sat on chests on deck when they rowed.

## STEERING BOARD

Unlike earlier ships, where the Norse steered with a loose oar, the Vikings attached a steering board to the right side of the ship's stern. This gave rise to the name that we still use for the right-hand side of a vessel: starboard.



## YARD

The yardarm held the ship's only sail in place. Sails in the Viking Age were referred to as square sails.

## ANCHOR

Early anchors consisted of a large stone in a wooden frame. Later, the Vikings began forging them from iron. The anchor was tied to thick ropes twisted from juniper twigs.

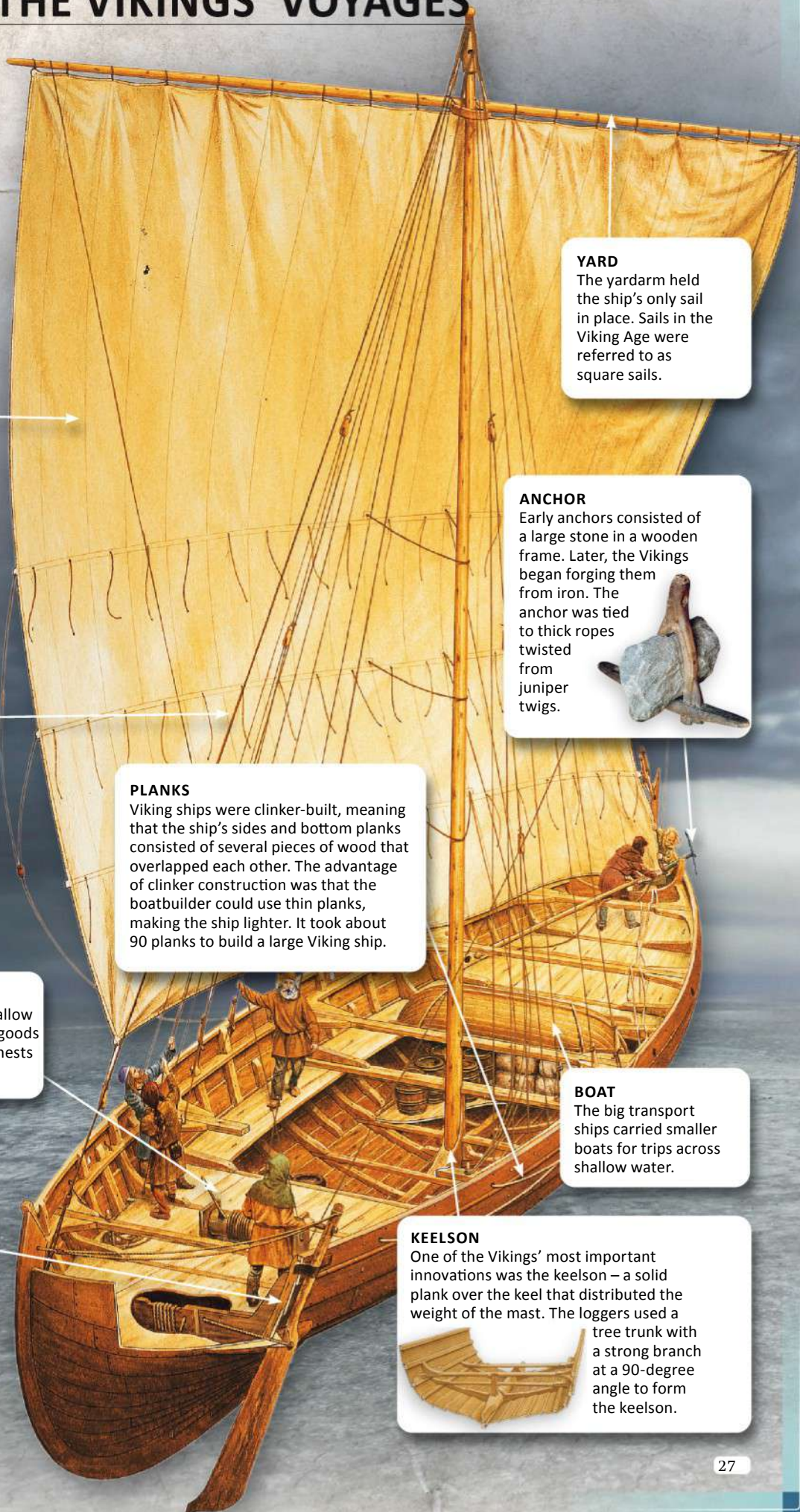


## BOAT

The big transport ships carried smaller boats for trips across shallow water.

## KEELSON

One of the Vikings' most important innovations was the keelson – a solid plank over the keel that distributed the weight of the mast. The loggers used a tree trunk with a strong branch at a 90-degree angle to form the keelson.





>> Star, which the Vikings called *leidarstjarnan*, the guiding star.

#### LANDSCAPE WAS A REFERENCE

Scenery along the coasts could also be used as landmarks. The Vikings kept an eye out for familiar hills and mountains, burial mounds or islands with a distinctive

The Vikings adorned their ships with beautifully carved weather vanes that were fixed to the masthead.

shape. Often, they named places because of what they looked like to remember them better next time. For example, the island of Hjelm (which translates as Helmet) in the Kattegat, Denmark, still bears the name the Vikings bestowed on it. The Vikings sometimes raised artificial landmarks where the landscape lacked distinctive

features, such as an upended old keel or a cairn, a large stone structure visible from the sea. The Norse also brought locals on board to guide them in uncharted waters.

The sailors used all their senses as the ship ploughed steadily through the waves. They noted the colour of the water, which could reveal the presence of reefs and rocks just below the surface. The water's smell and taste indicated its salt content and could hint at the presence of nearby rivers. In the sky, cloud formations, colours and shifts in the wind's direction heralded changes in the weather. The types of birds and sea creatures could also help pinpoint the ship's position. The Vikings gathered a wealth of knowledge about wildlife: they learned where particular sea creatures foraged and what species of birds

they could expect to encounter on the open sea and along the coasts. Floating leaves and other plant detritus showed the ship was approaching land, as did the scents of freshly cut hay and smoke.

#### TRADE CHANGED THE SHIPS

In just two centuries, the swift and agile Viking longships used during the Lindisfarne monastery sacking helped Norse warriors subjugate large areas of England, the North Atlantic and Russia. Meanwhile, Viking trading ships filled with goods sailed on rivers, around fjords and across seas from Greenland to Constantinople. Viking cargo ships, known as *knarr*, carried wives, livestock and other goods to the Norsemen's new colonies.

Viking shipbuilding changed as trade across the kingdoms escalated. From the start of the 11th century, the Norse built more *knarr*, which, with rounder and wider hulls, could carry considerably more cargo than the longships. At the same time, the increasingly powerful kings of the Viking Age began to build fleets of longships. Viking ships grew in size to accommodate larger companies of warriors. The ship dubbed *Roskilde 6* – which at 36 metres is the longest Viking ship found to date by archaeologists – was built after 1025. The *Skuldelev 2*, which was almost 30 metres long and was reconstructed in modern times, was initially built in Ireland in 1042.

With designs of this size, shipbuilders had to adjust their approach. For example, they began to fix the vessels' frames with



The 11th-century Bayeux Tapestry shows how sailors used to plumb the water depth with a pole.



wooden pegs instead of lashing them together. Over the years, the felling of so many oaks meant that this favoured wood became more scarce, so boatbuilders had to use other trees, such as birch and ash, in their designs.

### COLOURS SHOWED POWER

The new larger warships were not suitable for making lightning attacks. Instead, the newly built fleets demonstrated the king's power. Royal boatbuilders painted the ships in brilliant colours – for example, the Gokstad ship was decorated with a striking combination of yellow and black – and adorned them with wooden figures.

A monk from the Flemish monastery of Saint-Omer described the fleet of the Danish Viking King Sweyn Forkbeard, which set out to conquer England in 1013:

“On one side lions moulded in gold were to be seen on the ships; on the other, birds on the tops of the masts indicated by their movements the winds as they blew, or dragons of various kinds poured fire from their nostrils. Here there were glittering men of solid gold or silver.”

According to the monk, even smaller ships were decorated:

“The sides of the ships, which were not only painted with ornate colours but were covered with gold and silver figures.”

Despite such flashy decoration, the era of Viking ships was coming to an end by

“Felling so many oaks meant that this wood became more scarce, so boatbuilders had to use other trees.”

the latter half of the 11th century. The centre of power shifted south as wealthy merchants from northern German market towns slowly began to dominate the waters around the Baltic. Supremacy was no longer based on military might alone but on trade, too. And as a trading vessel, the medieval cog proved superior to the Viking *knarr*. The two ship types were similar, but the barrel-shaped hull of the cog could hold more cargo, and its solid deck protected goods

from the wind and weather. Two raised platforms, one at the bow and the other at the stern, enabled the crew to defend the

ship from enemies more easily. And so, by the start of the 13th century, the cog had largely replaced Viking trading ships in Nordic waters.

### SAILING INTO RECENT TIMES

Fishermen in northern Norway, however, stuck with Viking boatbuilding traditions with their 12-metre-long clinker-built wooden *femboring*. In the Norwegian regions of Nordland and Trøndelag, some locals continued to fish out to sea in their *fembornings* until as recently as the end of the 19th century, after which Viking shipbuilding became an activity that only museum teams engaged in as they tried to rediscover the skills that built an empire. ■

#### TECHNOLOGY

#### CULTURE

#### ECONOMY

#### DAILY LIFE



### Solar compass set the course

Scholars believe the Vikings used a sun compass that consisted of a round disc with a wooden cone in the middle. As sunlight fell on the compass over the course of day, the shadow of the cone's tip would trace out an arc. The point where the arc came closest to the centre of the disc

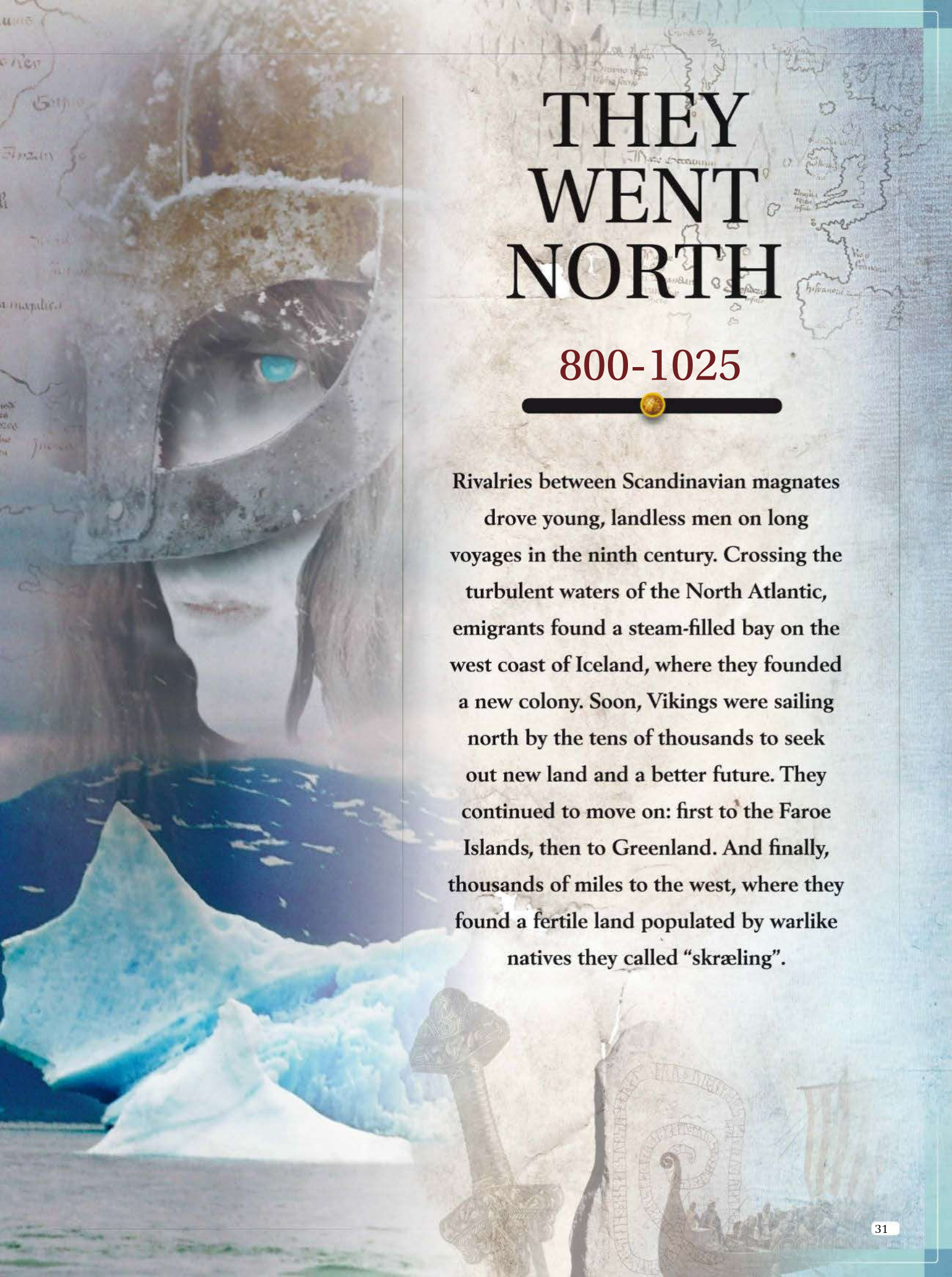
marked where the sun had been at its highest point in the sky, which for the Norse meant due south. This enabled the sailors to calculate a north-south axis. The Vikings had to check the arc regularly to take account of the changing seasons and the ship's position.











# THEY WENT NORTH

## 800-1025

Rivalries between Scandinavian magnates drove young, landless men on long voyages in the ninth century. Crossing the turbulent waters of the North Atlantic, emigrants found a steam-filled bay on the west coast of Iceland, where they founded a new colony. Soon, Vikings were sailing north by the tens of thousands to seek out new land and a better future. They continued to move on: first to the Faroe Islands, then to Greenland. And finally, thousands of miles to the west, where they found a fertile land populated by warlike natives they called “skræling”.



## 800-1025

**800** Norwegian Vikings arrive in the Faroe Islands and settle there.

**c.870** The first Vikings arrive in an inhospitable Iceland.

**982** Erik the Red discovers Greenland, which he soon colonises.

**1000** Erik's son, Leif the Lucky, travels west from Greenland to land in America.

**1025** Warlike natives and the long distances home force the Vikings to give up colonising North America.

800 >>> 870 >>> 982 >>> 1000 >>> 1025 >>>

Experienced Vikings arriving in the Faroe Islands for the first time must have felt anticlimactic. There were no thriving towns or bustling marketplaces, no rich men's treasures or glittering monastic silver to plunder. Only a rugged coastline with mountains and desolate tundra of heather, juniper and rye grass.

But there was at least land to build houses on, to cultivate and to call your own. And for the Vikings who had come to the 18 small islands in the North Atlantic in the early years of the ninth century, land was worth more than gold. Back home in western Norway, the Vikings had cultivated the strip of fertile land that lay between the mountains and the Atlantic Ocean, but gradually it became crowded. Power – and therefore land – was concentrated in the hands of fewer and fewer magnates. As a result, farmers had to fight for an ever-smaller area of arable farmland. Over time, it had become difficult to find land, especially for those with drive and ambition. As a result, the most adventurous had gathered together followers, consisting of family, neighbours and acquaintances with the courage to start afresh somewhere new.

The pioneering Viking ships cut through the waves of the North Atlantic, heading to unknown lands.

In the Faroe Islands, the Vikings found conditions similar to those they'd

left behind in Norway. Cows and sheep could graze on the tundra, and fish, seals and whales swam in the sea. In addition, the mountains were home to a rich bird life that could provide eggs and meat.

However, the availability of land in the Faroes also dwindled over time, and soon Vikings with a yearning for more had to search even further north.

#### ICELAND WAS COVERED IN ASH

According to *Íslendingabók* (*The Book of the Icelanders*) – an early history written down by Ari Thorgilsson around 1120-1130 – the first Norse arrived in Iceland “870 years after the birth of Christ”. The book also stated that, “It is said with accuracy that a Norwegian called Ingólfr travelled from there [Norway] to Iceland [and] settled in the south in Reykjavík.”

If Ingolf had really arrived in 870, he would have encountered Iceland at its most inhospitable. Sometime in the late 860s or early 870s, Iceland was hit by a violent natural phenomenon. The ground on the south of the island had cracked and a pillar of fire, smoke and lava had been released. By night, the volcano's fiery red flames lit up the sky with an eerie glow, and by day, dust, smoke and ash darkened the sun. The eruption lasted several months, covering the ground with a thick layer of ash that still lay less than half a metre under the soil over most of the island.

We don't know if Ingolf or other Norse witnessed the eruption itself, but the Vikings must have felt the aftermath and seen the layer of ash. At the same time, they were exposed daily to a natural environment that, even under normal circumstances, was both violent and terrifying. All around the island were rumbling volcanoes, spurting geysers and bubbling pools releasing sulphur dioxide, all of which appeared to be driven by demonic underground forces. However, the unpredictable conditions failed to deter the Vikings. In the 50 years after

*The Faroese coast was steep and inhospitable, but the islands provided pasture for the Vikings' sheep.*



Today, the Icelandic flag flies where the Vikings met in Althing – a symbol of the ancient roots of Icelandic democracy.

Ingolf's arrival, heavily laden ships carrying immigrants arrived on Iceland's shores. The settlers came mainly from Norway, but seaworthy Viking ships also carried immigrants from the rest of Scandinavia and the British Isles – most commonly from Orkney, Shetland and northern Scotland, where the Norse had settled early in the Viking Age. Many had married or captured local Britons who now followed them north.

#### INGOLF CHOSE REYKJAVÍK

As with the exodus to the Faroe Islands, one man – often of high rank – typically led each group of newcomers.

In Iceland, each chieftain chose a patch of land, which he distributed among his people, who then lay beneath him in rank. The first settlers naturally chose the best land, and thus became the island's elite. As the first arrival, Ingolf quickly settled in a bay on the western side of the island. Here he had everything a Viking could desire: vast grazing land, plenty of birds and fish, a breeding ground for seals and a natural harbour. The land could grow barley for brewing beer, and there were even hot springs. In time, the place took its name from the steaming water: Reykjavík – ‘Smoky Bay’.

According to the *Íslendingabók*, Iceland was fully settled 60 years after Ingolf's arrival – in line with archaeological evidence. However, historians have to go as far back as 1095 to find the first reliable source for a count of Iceland's population. From this, historians calculated that the population at the end of the 11th century was between 40,000 and 100,000 people (compared to 299,000 today). However, they also estimate that the Icelandic settlers numbered several thousand within decades of Ingolf's arrival.

#### THE VIKINGS HAD SOCIAL WELFARE

Icelandic settlers faced great challenges. A diverse group of people – including both



Every summer, the Vikings met in Iceland where the Althing – the world's first parliament – convened. The parliament formulated new laws, ratified the old ones and ruled on disputes.



pagan Norwegians and Christian Britons – had to live together in relatively close quarters. They were all far from their homelands, living in a harsh environment. To keep everyday life peaceful, the Icelanders devised a unique social system. The settled land was divided into municipal areas called *hreppur*. Each *hreppur* was obliged to do what the family or local chiefs had done before: provide for the poor and take care of families who had lost their property in fires or natural disasters.

This was not solely altruistic. The legislation and the institution itself were intended as much to control the poor to prevent them becoming a burden on others as to give aid. For example, the law decreed that the poor could not marry – thus preventing them from reproducing – while vagabonds were subject to forced castration.

Iceland's laws were initially formulated at local assemblies, but soon the local councils evolved into a unified, national assembly. The Althing, as it came to be called, met for the first time in the summer of 930. The meeting

place of the fledgling nation's first political institution was the plain of Thingvellir in south-western Iceland, 50 kilometres from Reykjavík. Here, in a dramatic rift valley bordered by high cliffs, Iceland's freemen gathered for two weeks every June. New laws were made and old ones upheld, and each

time the gathering reached a consensus, the *lögsögumaður* (lawspeaker) – a cross between a court president and a secretary – went up on a high outcrop called the Law Rock to proclaim the new law to all in a clear voice. The text of the law was not written down, for the Icelanders had no written language; >>>>

## TECHNOLOGY.....

## CULTURE.....

## ECONOMY.....

## DAILY LIFE.....

### Wadmal was Iceland's gold

Apart from land, Iceland had few natural resources. Even timber for ships had to be brought from Norway. In return, the Icelanders sold the strong, felted woollen fabric called wadmal, which soon became a unit of measure like silver and

gold. In 1050, one Icelandic penny was equivalent to six cubits (3.78 metres) of wool, and the law also used the fabric as a yardstick. To marry, a man had to possess 720 cubits of wadmal – about 20 years' wages for a landless labourer.





# “Only 14 of the convoy’s 25 ships made it”

>>>> instead, the lawspeaker was expected to memorise the laws.

In addition to acting as Iceland’s legislature, the Althing served as a market and meeting place. For the entire two weeks, the landscape below the Law Rock was covered with stalls and tents. Mead flowed in abundance as goods changed hands and jesters entertained. The gathering helped the Althing become a rallying point in the middle of a violent period marked by blood feuds and vigilantism. In Icelandic society, even a small insult – such as suggesting that a man’s sparse beard

growth made him less than masculine – could ignite a long feud between families, leading to revenge killings and arson. The Althing provided a means of mediating such disputes and in this way functioned as a court of law.

In practice, although the Althing is the world’s oldest parliament, the institution was not democratic by modern standards. Only free, land-owning men had access, while women, servants and ordinary agricultural workers had to stay at home.

Historians believe that of the estimated 60,000 inhabitants of Iceland around the year 1000, only 4,500 had access to the Althing. But compared with the internal strife and power dominance that was prevalent in Scandinavia, Icelandic government was open and forward-looking. Crucially, it

also helped establish Iceland as relatively peaceful and harmonious.

## OUTLAW DISCOVERED GREENLAND

Even for Iceland’s inclusive society, however, some people became too much to handle. One such person was Erik the Red. Erik, as the saga tells, was born in Norway, but came to Iceland with his family as a young man in the late tenth century. Although the best land had long since been taken, the family managed to make an excellent living, and Erik was even married to Thjodhild – a woman of distinguished Icelandic lineage. Unfortunately, Erik was extremely hot-tempered, and found himself constantly at odds with his neighbours. Several quarrels developed into major feuds, and in 982 the Althing banished Erik from Iceland for three years.

At the time, Erik had heard that there was an unexplored piece of land to the west. No one had ever been there, but it was rumoured that a northerner called Gunnbjörn Ulfsson had once – probably in the early tenth century during a journey from Norway to Iceland – been blown off course and seen land west of Iceland. The account of Gunnbjörn’s experience was later written down in *Grænlandinga Páttir*, the *Saga of the Greenlanders*:

“Then the wind dropped and they were beset by winds from the north and fog; for many days they did not know where they were sailing. After that they saw the sun and could take their bearings. Hoisting the sail, they sailed for the rest of the day

## DISCOVERY:

This skull was found in the Greenland churchyard where Erik the Red was buried. Archaeologists speculate it may be the remains of the Norwegian Viking or a close family member.



▲ **RUINS:** North-east of Qaqortoq (now Julianehåb), the settlers built a church where they gathered to pray. The remains still stand after nearly one thousand years.



LEIF (THE LUCKY) ERIKSEN 970-1020

## THE FIRST EUROPEAN IN AMERICA

■ Leif was born in Iceland, the son of Erik the Red, but at the age of 12, when Erik was exiled, he followed the rest of the family to Greenland. Around the year 1000, Leif set out to find land even further west. With his entourage, he reached what is now Newfoundland in North America. According to historians, he is probably the man who founded the Viking base at L'Anse aux Meadows, the Gateway to Vinland – the area the

*Sailed from Greenland to Canada – Founded Viking settlement at L'Anse aux Meadows*

Vikings scoured for natural riches and settlement opportunities. Leif's story is known from the sagas, which were written down long after the Viking Age and are probably based on stories passed down through generations. The nickname "the Lucky" was given to Leif when he rescued a shipwrecked countryman on his way home from America, who in return gave the lucky explorer all his possessions.



before sighting land. They speculated among themselves as to what land this would be, for Bjarni said he suspected this was not Greenland."

Erik, who had little to lose, decided to find out what Gunnbjörn had seen. Resolutely, he set sail for the unknown. After sailing more than 500 kilometres from Iceland, he first encountered an inhospitable and icy land, but as he followed the coast south, the outlook suddenly improved. After a long voyage, a series of narrow fjords and fertile land suddenly appeared. When Erik returned to Iceland and told of his discovery, old grudges were quickly forgotten. Soon

**700**

Icelandic Vikings travelled with Erik the Red to colonise Greenland.

Erik had gathered 25 shiploads of settlers with the courage to colonise Greenland. And courage they needed: the journey took them across 1,200 kilometres of rough seas. Only 14 of the convoy's 25 ships made it.

Erik the Red settled in the middle of what is now known as the Eastern Settlement. The Norse territory eventually grew to a 200-kilometre-long coastline stretching along the west coast of Greenland towards the southern tip of the island. Further north – behind a 500-kilometre stretch of coastline that the Vikings left uninhabited because there was no proper grazing land – the Western Settlement was founded in the area where the Greenlandic capital, Nuuk, now lies.

Unlike Iceland, Greenland never developed a large Viking population –

archaeologists estimate that the large island was home to no more than 2,500 Norse at any one time, based on the discovery of goat droppings. As in Iceland, the Norse in Greenland survived mainly by raising cattle and sheep, while supplementing their diet with seals and fish. Walrus skins and tusks were exported by Greenlanders to Scandinavia, where the tusks were popular and the skins were used to make strong ropes for ships.

### LEIF TOOK VINLAND

The Vikings' desire to explore did not stop with the settlements along Greenland's coasts. Sometime around the turn of the millennium, Erik's son Leif, later called Lucky, continued the family tradition of exploring to investigate rumours of new lands. With his entourage, he set out from the coast of Greenland, heading west, and after a >>>>

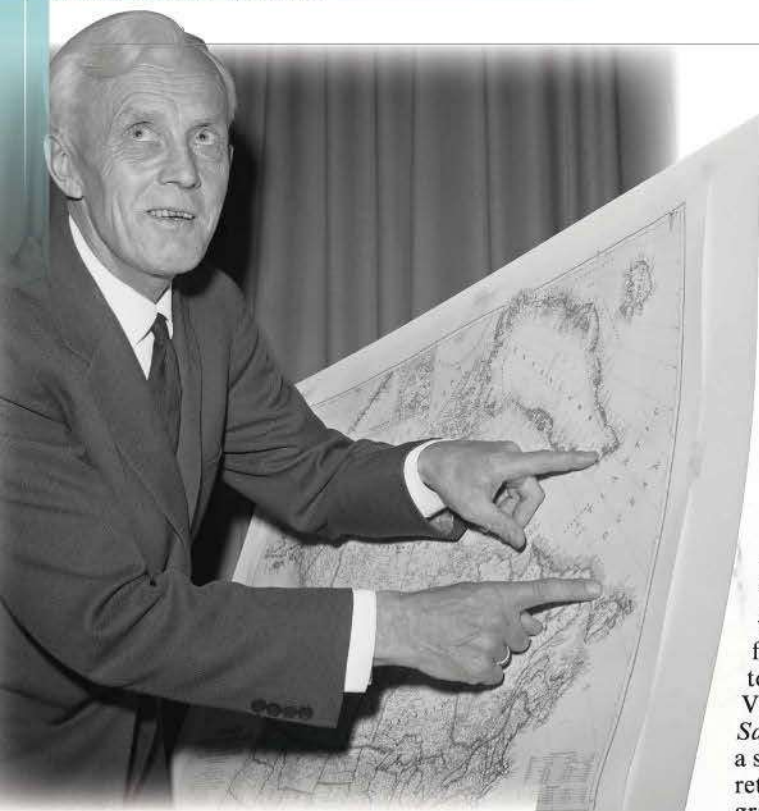


**EXPORTS:** Narwhal tusks were sought after in Europe, where they were sold as unicorn horns. The Norse hunted narwhals in the waters around Greenland.



**SOURCES:** The Icelandic sagas – including those in the Flateyjarbók (above) – describe in detail the Norse journey to Greenland and later North America.





In the 1960s, Norwegian adventurer Helge Ingstad and his wife, Anne Stine, proved that the Vikings had sailed the long voyage from south-west Greenland to Newfoundland. Among the finds were iron objects and a copper ring pin in typical Viking style.

“We’ve found a land of fine resources, though we’ll hardly enjoy much of them”

walnut was found among the Viking remains – a sure sign that the Norse travelled a great distance, since the nut only grows south of the Gulf of St Lawrence, several hundred kilometres south-west of L’Anse aux Meadows. To the south, according to the sagas, the Norse also found the wine that came to give the area its name: Vinland. According to the *Saga of Eric the Red*, Leif sent a slave to explore inland, who returned three days later with grapes. In Old Norse, however, the name Vinland may have meant something quite different from grapes – ‘wine’ can also be interpreted as ‘meadow’ or ‘pasture’.

arrow into his intestine. Thorvald drew the arrow out and spoke: ‘Fat paunch that was. We’ve found a land of fine resources, though we’ll hardly enjoy much of them.’ Thorvald died from the wounds he suffered shortly after.”

Thorvald’s words were most likely put into his mouth by the saga’s author, but the story’s message was true enough. It soon became clear that colonising America was beyond the Vikings’ reach – and not just because of the natives. The 3,200-kilometre journey from Greenland could take anywhere from two weeks to two months, depending on the weather. The distance made it difficult to maintain contact with other northerners and to transport natural resources such as timber to Greenland and Iceland. A permanent settlement was therefore never achieved. Several of the farms in L’Anse aux Meadows were burnt down – perhaps by the Norse themselves as

long time at sea, Leif reached as far as North America, more than 7,500 kilometres from his family’s Norwegian homeland.

The small band of northerners settled on the northernmost tip of Newfoundland Island in Canada, at an area now called L’Anse aux Meadows. Archaeologists have found traces of a settlement there and several unmistakably Norse artefacts – including a copper alloy ring pin and rope made from spruce roots.

The settlement at L’Anse aux Meadows was more of a base where Vikings on long voyages could have their ships serviced, rather than a town. Archaeological evidence shows that the Vikings travelled great distances both north and south along the coast of America. For example, a grey

#### ARROWS STOPPED THE VIKINGS

Historians estimate that Viking Vinland stretched along the Gulf of Saint Lawrence and that its exploration was a precursor to eventual colonisation. This never came to pass, however, because the new land was populated by hostile proto-Inuit peoples. The Vikings called them “skræling”, but these barbarians and their arrows were not to be trifled with. On one of the expeditions, Leif’s brother

Thorvald was fatally wounded, according to the *Saga of Eric the Red*. A “one-legged creature” suddenly emerged from a clearing and rushed towards the Norwegians’ moored ship:

“Thorvald, Erik the Red’s son, was at the helm, and the one-legged man shot an

“Several of the farms in L’Anse aux Meadows were burnt down – perhaps by the Norse themselves.”



#### MEANWHILE IN MEXICO

##### MAYAN CIVILISATION DISAPPEARED

As falling temperatures made it harder for Vikings in Greenland and Iceland to survive, another highly developed civilisation thousands of kilometres to the south-west also struggled with the climate. Rising temperatures and deadly droughts no doubt prompted the Mayans of Central America to seek help from the rain god Chaac (left) – but prayers failed to prevent the violent weather changes that brought down societies with advanced architecture and mathematical systems. Scientists from NASA and other US space agencies have since shown that the drought disaster was partly due to the Mayan plunder of their forests – just as the Norse in Greenland made life harder for themselves by overexploiting the cold island’s scarce grassland.





a symbol that they would never be home to Viking families. Nevertheless, the Vikings no doubt visited North America several times after leaving L'Anse aux Meadows. Evidence includes a Norwegian coin minted no earlier than 1065, which was found at a Native American settlement in the US state of Maine in 1957.

#### DEFORESTATION RUINED ICELAND

In Greenland, too, Norse rule was relatively short-lived. The prerequisite for the Vikings to have been able to sail in such northern climes was an unusually warm climate. From around 1300, however, conditions changed. Temperatures dropped considerably over the next four or five centuries. During what scientists have called the Little Ice Age, ice and cold made sailing difficult. At the same time, overgrazing and extensive ploughing depleted south-west Greenland's grazing lands, and soon there wasn't enough food for the northerners' livestock – the staple of their way of life. Slowly, the Vikings relocated back to milder climates, probably Iceland or Norway. The last written trace of the Scandinavians in Greenland is a record from Hvalsey Church in South Greenland. There a young man named Thorstein Olavsson married a young woman, Sigrid Bjørnsdatter, on

16th September 1408. The couple then moved to Iceland.

Back in Iceland, however, the Norwegians did not fare very well either. Predation on the island's forests for timber and fuel degraded the land and soon made it unsuitable for farming. At the same time, dwindling natural resources became concentrated in the hands of a small number of powerful families, and from 1235, a full-scale civil war broke out. To end the strife, in 1262-64 the Icelanders agreed to come under the protection of the Norwegian King Hakon as a Norwegian province. Later, with the Kalmar Union of 1397, Denmark's Queen Margrete I secured power over the whole of the Nordic region, including Iceland and the Faroe Islands, which had already become part of Norway in 1035.

Despite this, the legacy of the independent Vikings lives on in the language of the North Atlantic islands – and in the name of Iceland's independent parliament: Althing. ■

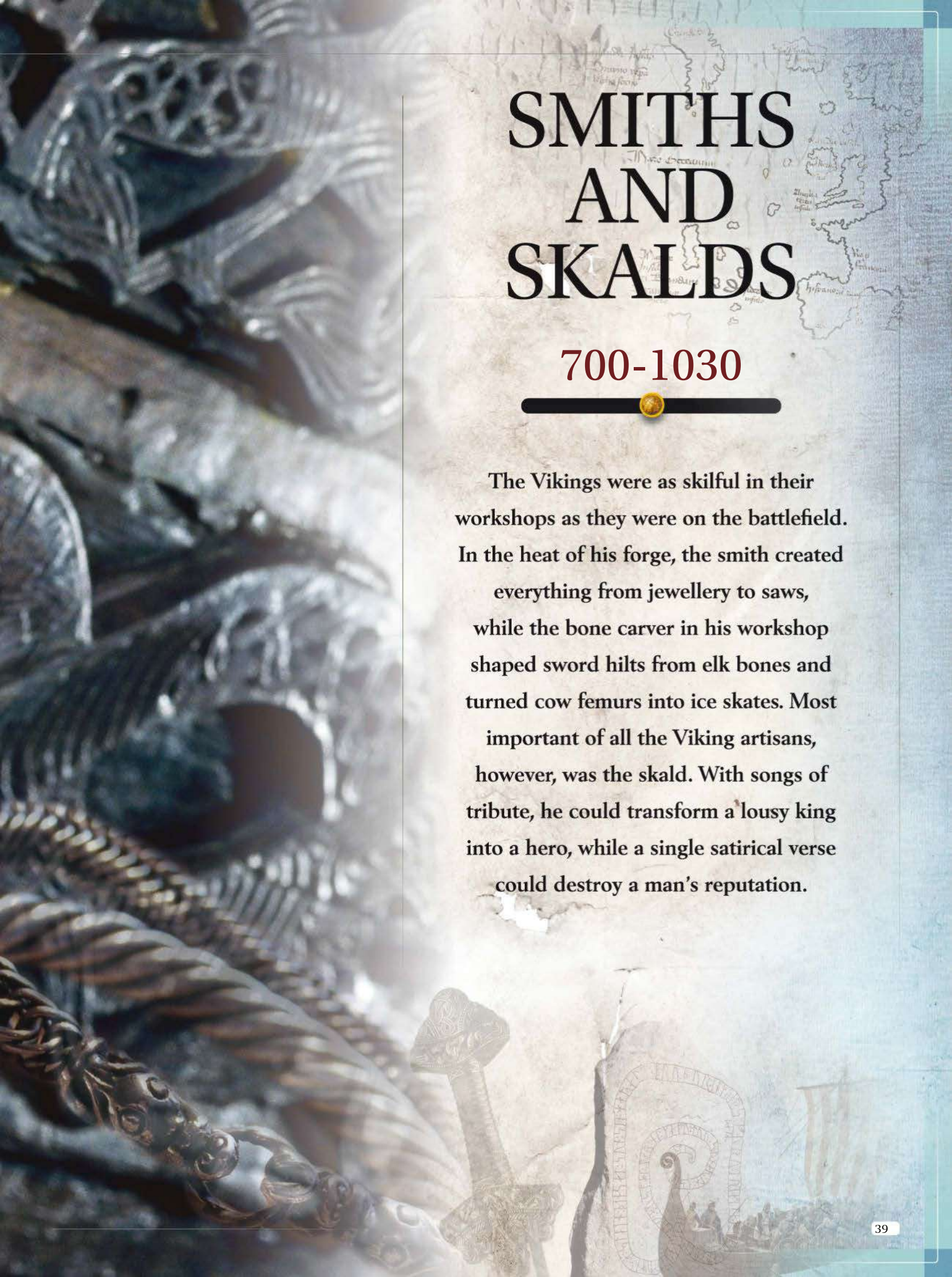
*The "Skræling", as the Vikings called the native proto-Inuit tribes of North America, helped scare the Norsemen off with their ferocity.*











# SMITHS AND SKALDS

700-1030

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The Vikings were as skilful in their workshops as they were on the battlefield. In the heat of his forge, the smith created everything from jewellery to saws, while the bone carver in his workshop shaped sword hilts from elk bones and turned cow femurs into ice skates. Most important of all the Viking artisans, however, was the skald. With songs of tribute, he could transform a lousy king into a hero, while a single satirical verse could destroy a man's reputation.



## 700-1030

**780** The gripping beast appears on Viking arts and crafts.

**834** Viking Queen Åsa Haraldsdottir is buried at Oseberg.



**866** Norse set up workshops in Jörvik and other British communities.

**890** Sail of Gokstad ship is dyed yellow and black.



**1030** Olaf the Holy's court skald sings to his warriors.

780 >>> 834 >>> 866 >>> 890 >>> 1030 >>>

The Danish King Sweyn Forkbeard was impressed when, before the Battle of Svolder in 999, he saw the enemy Norwegian force's longship *Ormen Lange* sail past his army. Not only was the ship a full 45 metres long and manned by hundreds of warriors, but it was also decorated with the finest craftsmanship of the time. On the prow was the head of a dragon forged in gleaming gold. From the stern, the beast's tail shot into the air. As the *Ormen Lange* ploughed through the water, sail hoisted and sun glinting off the gold, the Norwegian warship looked like a dragon soaring over the sea, ready for battle. A dragon's head

was one of the Viking Age's most widely used symbols of power and invincibility, and the creature was frequently seen on weapons and ships. But it was also proof of Viking woodcarvers' skills.

Numerous finds scattered across the Nordic countries, the North Atlantic, the British Isles and much of Europe bear witness to the Vikings' artistic expertise and craftsmanship. From jewellery and board games to bridles and cups, their relics are skilfully adorned with carvings, engravings and gilding.

**ANIMALS DOMINATED NORDIC ART** Among the most impressive were Norse dragon carvings, which often looked like giant snakes – or, as the Vikings called them, *ormr* (worms).

Archaeologists don't know how the dragon motif made its way into Scandinavia, but they suggest that it has been known since the Bronze Age and was used in cultures all over the world, even in places where people couldn't have ever seen snake-like animals. Historians therefore believe that the concept of dragons is a relic of prehistoric times, when humans had to be wary of large reptiles and animals with sharp claws.

Dragons were not the only animals to feature in Viking art. The Norse used animal

◀ This stone from Gotland was probably painted when first erected in the seventh century.



Gripping beasts were probably a Scandinavian innovation. The decorative design came into fashion in the eighth century.

motifs to express divinity or virtues such as courage, warrior spirit, strength and wisdom. Images of people with birds, for example, represented the wise father of the gods, Odin, who carried his two ravens, Huginn and Muninn, on his shoulders.

**230,000**

pottery shards excavated in York bear witness to the Viking town's bustling pottery workshops.

The fearsome wolf Fenrir from Viking mythology also appeared frequently in Norse imagery. The Vikings' distinctive gripping beasts – agile animals that used their paws or claws to clasp themselves or other animals or decorations to form a pattern – can be recognised in art from the eighth century and throughout the Viking Age. Historians are at a loss to explain how this distinctive motif came about, but it was probably a Nordic innovation. Archaeologists have also found examples of gripping people. In the early Viking period, animals were crudely carved, but over time, craftsmen achieved increasingly detailed and lifelike results.

**FIGURINE MORE COSTLY THAN SLAVE** Excavations in Scandinavian Viking towns and the trading centre of Jörvik, now York, >>>

## TECHNOLOGY

## CULTURE

## ECONOMY

## DAILY LIFE

## Vikings were vain

Finds from Viking graves show that the Norse used nail cleaners, combs and tweezers to care for their appearance, while the remains of toothpicks show they also tried to maintain a beautiful set of teeth. Rich, well-dressed Vikings

filled their wardrobes with clothes of silk, finely woven wool and fur adorned with silver and gold. Plus, both men and women wore eye makeup, reported the Arab traveller Al-Tartushi, who visited Hedeby in the tenth century.







*Because of the risk of fire, Viking forges were located on the outskirts of towns, out of the wind.*



# VIKINGS USED NORDIC MATERIALS

Scandinavia's forests, shores and below the ground provided wood, bone, leather, metals and amber for Viking craftsmen. In workshops, the natural materials were moulded, cut or woven into everyday utensils and ornaments.

▲ Viking women spun yarn from sheep's wool, which they then used to weave clothes and sails.

▲ The blacksmith cast household pots out of copper and iron.

▲ The tanner sewed animal hides to make bags and purses – buttons were carved from wood or horn.

>>>> have shown that Viking society was rich in workshops used by different craftsmen.

The bone carver collected antlers from deer or elk in the forests, then back in his workshop, he shaped them with a knife, iron file, saw or hammer and chisel. Bones and antlers were carved into combs, which were popular among the Norse and an indispensable weapon against lice. The bone carver also made sword and knife handles, game pieces, musical instruments and needles. Femurs from cows and horses could be carved into a pair of skates. On

the North Sea and Baltic coasts, jewellers hunted for the Nordic gemstone golden amber. This relatively soft material could be filed and polished into beads, amulets or game pieces, for which foreign chieftains and kings paid well. One source, dating from the Roman Empire, long before the Viking Age, says that a single amber figurine cost more than a slave.

## TOOLBOX WAS WELL EQUIPPED

In the tannery, hides from oxen, sheep and goats were made into shoes, purses, belts and harnesses. To soften the hide, the tanner used tannic acid, which came from

oak bark. The leather was then cut and sewn together with bone or iron needles.

These iron needles were made in the forge, which was located a little outside the town and away from the wind because of the fire hazard. In the searing heat of the small clay-lined buildings, the blacksmith's journeymen or slaves would pump the bellows that fed the fire in the furnace. Silver had to reach a temperature of 960 degrees Celsius before it became liquid. Then the smith would pour the molten metal into moulds of clay or stone that bore the desired design, and when the silver solidified, the jewellery could be knocked out of the mould and embossed or polished.

At Mästermyr on Gotland, Sweden, archaeologists have found a Viking chest containing around 100 tools for working wood, iron and copper, including two saws – one for metal and one for wood. The contents of the toolbox suggest the same craftsman worked with several different materials and he probably travelled around, offering his services.

Travelling and meeting traders from all over Europe left their mark on Norse craftsmanship. For example, the inspiration for the trefoil brooch, which many women in the early Viking period used to fasten





▲ Finds of undamaged leather boots from Hedeby and York show what Viking footwear was like.

▶ Bones from sheep and goats were carved into flutes.

▲ Gripping beasts adorned Viking craftsmanship, as on this sword hilt.

▲ The jeweller carved soft amber into figurines, such as this playing piece representing the god Freyr or Thor.

▲ When cattle were slaughtered in the autumn, their horns could be polished and made into drinking horns.

▲ The Vikings extracted iron from ore all over Scandinavia and used the metal to make spoons, like this one from ninth-century Sweden.

cloaks and other garments, came from the Frankish Empire. In turn, the Vikings also influenced the arts wherever they voyaged, not least in England and Ireland.

#### VIKINGS PAINTED THEIR CRAFTS

While archaeological finds can tell us about the shapes and patterns of crafts, the colours of the Viking Age are harder to determine. Centuries of weathering or being buried in the ground have destroyed the Vikings' paintwork. However, traces of pigments reveal that the Norse diligently painted their textiles as well as wood and stonework. The hulls and sails of Viking ships were brightly coloured and had symbolic significance. The sagas describe blue, for example, as the only colour worthy of a warrior.

The Gokstad ship, built around 890, was found in a burial mound in southern Norway, and historians have discovered traces of black and yellow paint on its hull. Analysis has shown that the yellow pigment was extracted from the precious orpiment – a sulphurous mineral that the Vikings brought from the Middle East. The imported dye was expensive, so the Vikings usually preferred a cheaper yellow pigment made from ochre, which the Vikings could

easily find underground in Scandinavia. When ochre was heated, its colour changed to red. Both ochre pigments were popular for sailcloth. A more vibrant, but dearer, red pigment was made by the Vikings from the imported mineral cinnabar, which was known for its beautiful shine and durability. Blue pigment could be extracted from woad or indigo – a plant dye shipped from India. The Vikings made the paint itself by mixing pigments with beer, buttermilk or linseed oil.

#### SPECIALISTS

On Gotland, between around 400 and the 12th century, the Vikings erected 475 stones bearing carvings of battle scenes and other motifs from Norse mythology. Traces of pigment show that the stones were once decorated

in black and red. The stones' motifs tell the story of Thor, the Vikings' mighty god of thunder, who, on a fishing trip with Hymir the giant, caught the Midgard Serpent – according to Norse mythology, this was a dragon-like creature so large that it encompassed the entire world. Like most Viking craftsmen, the stonemason behind the carving of Thor's story is unknown. The >>>>

#### MEANWHILE IN CHINA

##### EMPEROR HAD HIS OWN PAINTING ACADEMY

During the Song dynasty in 960-1279, China's emperors gathered the country's finest artists in an Imperial Painting Academy. Here, painters from all over the empire developed a shared lifelike, detailed style with fine brushstrokes, depicting typical Chinese landscapes. The academy enjoyed its heyday from 1101-1125 under Emperor Huizong, an accomplished painter of birds and flowers.





◀ Archaeologists found a tapestry in the Oseberg tomb, which museum staff have reconstructed.

Norse did not sign their works, but archaeologists have managed to identify individual artists. By closely studying the carvings found in the Oseberg burial mound and then comparing style and technique, archaeologists have concluded that a group of prominent – but still anonymous – artists served the king and queen and won great acclaim.

More humble craftsmen were quick to imitate the royal artisans, and archaeologists have found many copies of buckles and jewellery made in cheaper metals, such as copper. These less expensive replica pieces were sold to peasants or merchants, spreading the fashion of the time to all levels of society.

### SKALDS ENSURED LEGACY

Viking skalds, which were similar to bards, were also in the service of kings and chieftains. Unlike the *Edda* poetry, which was about gods and legends, the skalds glorified the brave deeds of chieftains or kings. Responsible for reputation and legacy, the rhyme smith was a member of the *hirdmen*, the ruler's personal retinue, and accompanied his employer on expeditions and wars, where he had to report on the events in song and poetry – always ensuring the king appeared in a flattering light, of course. These songs of tribute were sung and retold over the centuries, being passed down until poets recorded them for posterity in the Icelandic sagas, such as the tribute to ninth-century King Olaf Gudrødsson in the saga *Heimskringla*, which historians believe originated from Harald Hårfager's skald Thjóðólfr:

"Long while this branch of Odin's stem was the stout prop of Norway's realm; long while King Olaf with just pride ruled over Westfold far and wide."

The skald was also responsible for keeping up morale. While the mead flowed as the hirdmen gathered around the fire in the longhouse, the skald would sing well-known verses about loyalty, courage and honourable struggles. One master of this art was Tormod Kolbrunarskald, court skald to the Norwegian King Olaf the Holy.

According to accounts, one summer morning in 1030, the skald was roused from his sleep to present himself to the king. Olaf the Holy had lived in exile in the Rus' empire but had now returned to the North to take power. When the king marched into Norway, Olaf met stiff resistance from the peasants and faced a decisive battle. He'd had a dream that seemed to be a bad omen, and the atmosphere was tense in the camp at Stiklestad. To fill the men with courage, the skald was ordered to sing, and the choice of song was *Bjarkamál* – a traditional bard's poem about the glorious battle of the legendary King Rolf Krake. The king's warriors awoke and prepared for battle to the stanzas of "Ye sons of Adil, cast off sleep. ... Up in your might! The day is



The Oseberg tapestry – one of the few surviving Norse textiles – has provided invaluable knowledge about the colours used by the Vikings.





The 24-character runic alphabet of the Iron Age was simplified to 16 runes in the Viking Age.

breaking.” Several warriors were so moved by the poem that they thanked Tormod, says the Icelandic poet Snorri Sturluson, who went on to confess that the Norwegian king lost the battle.

### MOCKING PUNISHED BY DEATH

A skilled skald was as feared as he was praised. A mocking verse could ruin a man’s good name and reputation for ever. The Norse called such satirical sagas *niðvísur*, because a *niðingr* – a cowardly and lowly person – was the worst thing a Viking could be labelled. In *niðvísur*, the bard typically accused the victim of behaving like a woman – for example, doing women’s work or, worst of all, having sex with a man. One *niðvísur*, directed at two of the first Christians in Iceland, the German Bishop Friedrich and his Icelandic companion Thorvald, read: “The bishop has borne nine children; Thorvald was the father of all of them.” Despite his Christian message of mercy, Thorvald reacted according to the Vikings’ sense of honour and killed the two skalds who had written the song.

Christians did not hold back in their poems either.

In Iceland, a Christian Viking wrote a verse about Freyja, the goddess of love:

“I don’t want to blaspheme the gods, but Freyja seems to me a bitch.” That kind of obscenity could cost the author dearly. In the Icelandic *Grágás* (Grey Goose) laws, which were in force until 1262 and which historians believe reflect the Viking Age’s legal concepts, erotic poetry was on a level with rape or manslaughter, and could be punished with outlawry or death. Not least because obscene *niðvísur* could offend the targeted woman’s husband or close family. To conceal their forbidden erotic verse, Viking skalds used metaphors, such as in the risqué *Kormák’s Saga*, where the poet slyly spoke of the “sword of the love-hair’s island”.

### RUNE CARVERS WROTE LOVE POEMS

In addition to oral tradition, the Vikings were able to express their poetry and

tributes using their runic language. The Norse had been using the runic alphabet since the second century, and the writing had probably been inspired by the Latin letters of the Mediterranean. The runic alphabet of the Iron Age consisted of 24 characters; by the start of the Viking Age in the eighth century, it had been simplified to just 16 characters, consisting of straight lines that were easy to carve or scratch into wood, bone or stone. Each character had a name and meaning – for example, f was called *fē* and meant wealth or cattle, while s was *sól* and meant sun. The runes could be understood by people from all over Scandinavia but it was most likely only the upper classes who learned to read.

The Vikings erected most of the Nordic rune stones as tributes or memorials to great men and kings. But the Norse also used runes for more everyday messages, such as love letters. On a wooden stick used by women for weaving, a lovestruck Viking wrote a simple verse:

“Think of me, I am thinking of you; love me, I love you.” Another Norseman was more direct:

“Kiss me,” was written in runes on a piece of bone unearthed near Oslo.

Elsewhere in Norway, archaeologists have found a whole collection of small pieces of wood with short, pithy messages.

Some are declarations of love, while others express outright insults. One short *niðvísur* consisted of a man’s name followed by the accusation of being a *rassrgr*, which, historians say, meant a man who allowed

himself to be sodomised. However, some of the inscriptions made no sense, so archaeologists believe these were practice attempts before the carvers worked on their first proper rune stones.

Perhaps some of these novice craftsmen developed into the carvers of the 3,000 rune stones scattered across Scandinavia as memorials to dead Vikings.

### CHRISTIAN ART TOOK OVER

The visual arts changed significantly with the advent of Christianity. Figures of Christ and other Christian motifs gradually came to dominate Norse craftsmanship. For centuries, however, elements of Viking art lived on in Christian Scandinavia. The Norse interwove the new motifs with traditional Nordic patterns. This can be seen on Harald Bluetooth’s Jelling Stone from the late 900s, for example, where Christ on the cross is surrounded by intricate Viking patterns and the text is written in runes. Although the Norse began to erect gravestones in accordance with Christian practice, for a long time they were still inscribed with Viking runes. ■

## JEWELLERY MAKING

### BLACKSMITH ALSO MADE JEWELLERY

All metal goods, from swords to sewing needles, were made in forges. The smith shaped the glowing metal with a hammer on his anvil, but also cast decorated jewellery in moulds.

**1** The blacksmith modelled a piece of wax in his hands in the shape of a piece of jewellery. The wax was then wrapped in clay, and the smith made sure that the clay mould had an opening into which the metal could be poured.



**2** The clay mould was dried and fired. The wax melted, leaving an impression inside the clay.



**3** The smith heated precious metal – silver, gold or bronze – until it was liquid, then poured it into the clay mould.



**4** When the metal cooled, the clay mould could be broken. The smith then engraved decorations or soldered metal beads and threads on to the resulting jewellery.











# VIKINGS IN ENGLAND

793-1042

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Large bands of Vikings plundered the British Isles in the middle of the ninth century. But unlike before, the Norse did not return home after their raids. They settled as colonists and quickly carved out an area where Viking laws and Norse customs prevailed. Known as Danelaw, it had 12-man juries and magistrates' courts, and hundreds of towns with Scandinavian names soon sprang up. Humiliated Anglo-Saxon magnates became subject to extortion and could only watch as a Danish king crowned himself England's ruler.



## 793-1042

**851** The Vikings winter in England instead of returning home.

**878** Border of Danelaw is fixed after King Alfred's victory.



**991** Sweyn Forkbeard extorts the first sum of Danegeld.

**1016** Cnut the Great becomes king of England.



**1035** Viking power in England crumbles after Cnut dies.

850 &gt;&gt;&gt;

878 &gt;&gt;&gt;

991 &gt;&gt;&gt;

1016 &gt;&gt;&gt;

1035 &gt;&gt;&gt;

The entry in the *Anglo-Saxon Chronicle* for the year 835 is short and to the point: "In this year, the heathen devastated Sheppey." At first sight, the invasion of the little island in the Thames estuary was indistinguishable from any other Norse attack on the British Isles over the past half a century. But it was a turning point in England's history. The raid began a period of far more frequent raids in the British Isles. And unlike previous campaigns, the Norse didn't hurry home afterwards.

### VIKINGS OVERWINTER

The England that the predominantly Danish Vikings encountered was divided into several kingdoms, like Scandinavia, each ruled by its own chieftain or king. The island of Sheppey was in Wessex – the southernmost kingdom, which stretched from Cornwall in the west to the Thames estuary in the east. To the north-east was East Anglia, and to the north-west Mercia, which was bordered by Wales – a Celtic kingdom that remained independent well into the Middle Ages. North of the Humber estuary lay Northumbria, where the Vikings had sacked the monastery on the island of Lindisfarne in 793.

Wessex was a flourishing kingdom of bustling trading towns and rich manors, which meant that the Vikings didn't have to hunt for monastic

silver. Instead, they ravaged marketplaces, plundering stalls and stealing silver from merchants' chests. They looted and burned Anglo-Saxons' homes, and the spoils were so rich that in 851, a group of Danish Vikings decided they would winter in the British Isles rather than return home to Scandinavia as they had in previous years.

The *Anglo-Saxon Chronicle* – a book in which unknown writers from the ninth century onwards recorded the year's main events – reported that "The heathen for the

first time remained over the winter. And the same year came 350 ships to the mouth of the Thames, and stormed Canterbury and London, and put to flight Beorhtwulf, king of Mercia, with his levies, and went then south over the Thames into Surrey."

However, the invasion force that over-wintered in England in 851 was nothing compared to the "great heathen host" – perhaps led by the legendary King Ragnar Lodbrok – that, according to the chronicles, landed in the spring of 865. The sources do not mention how many Vikings the great pagan army numbered, but historians estimate that several thousand men arrived in hundreds of longships.

The Viking warriors marched through East Anglia, robbing the population of horses, grain and money, and forcing the locals to sue for peace.

In the winter of 866, the warriors continued north, ravaging the fertile area around the River Tyne. Then they ventured further north to Northumbria – a land of feuding rival magnates, where the Vikings easily relieved the locals of their valuables. Shortly afterwards, the Viking army turned south again to East Anglia, where they murdered King Edmund, before moving on to Mercia, which they laid waste with looting, burning and killing.

The raids continued west to the Isle of Man and north to Orkney and Shetland, all of which were settled by the Vikings. In Ireland, terrified monks reported one

The Anglo-Saxons rushed to bury valuables when the Vikings attacked.



The sea protected the monastery at Lindisfarne, but this did not prevent the Vikings from sacking it in 793. The event outraged the Anglo-Saxons.

monastery raid after another, while others fled to the Frankish Empire.

The Irish poet Sedulius Scottus, who fled to the continent, is believed to have written this ninth-century poem: "Bitter is the wind tonight/It tosses the ocean's white hair/Tonight I fear not the fierce warriors of Norway/Coursing on the Irish sea."

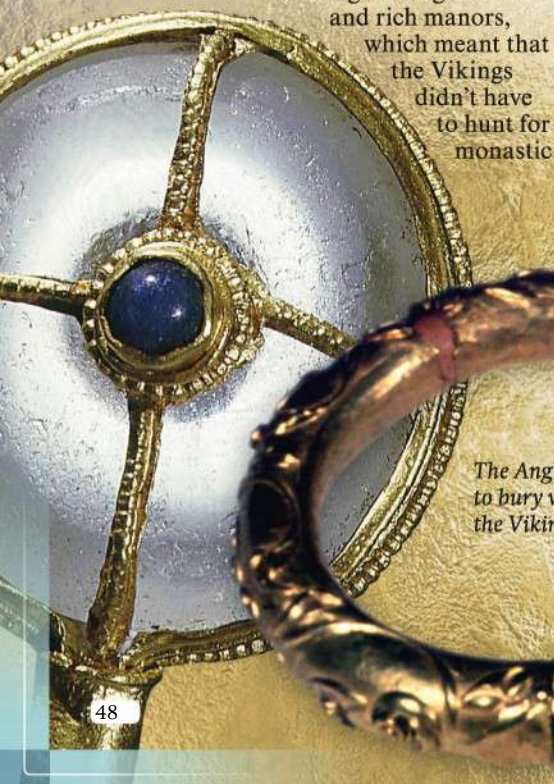
Frightened Britons tried to guard against the looting by burying their jewellery, coins and other riches. In North Yorkshire, one Anglo-Saxon poured 1,775 clinking copper coins into a pot and buried it in the ground. While in Staffordshire, another frightened Briton stashed jewellery – including two silver brooches, one gold ring and several bronze ones – and about 50 Anglo-Saxon silver coins in a leather wallet before burying it. In fact, archaeological finds reveal a string of buried treasures that bear testimony to the locations of the Vikings' raids.

### VIKINGS TOOK THREE KINGDOMS

Over the next 13 years, the Viking army defeated local peasant militias and royal armies. They cleverly exploited internal power struggles between magnates by allying themselves with one or the other, but ultimately they murdered them all and took their land.

"This year Halfdan shared out the lands of Northumbria, and they were engaged in ploughing and in making a living for themselves," the *Anglo-Saxon Chronicle* reported for 876. In the late summer of 877, the army moved on to Mercia, where the Vikings also distributed land. The pattern repeated itself in East Anglia from 878–79. Each winter, the Norse built a base in a strategic, easily defended location, then continued their raids in the spring until they had finally taken three of the four kingdoms: Northumbria, Mercia and East Anglia. Only King Alfred the Great of Wessex stubbornly held out against the Viking army. But in the spring of 878, the Vikings' fortunes turned. Alfred kicked the Norse invaders out of Wessex and forced the Viking King Guthrum to be baptised in the Christian faith.

The baptism, which also included 30 of Guthrum's men with Alfred in the role





# THE FIRST INVASION OF ENGLAND



England was a patchwork of small, independent kingdoms at the time of the first Viking invasion in the mid-eighth century. The invaders settled in an area known as the Danelaw, where the Danes' legal system and customs prevailed.

## SCOTLAND

■ Finds from Viking times in Scotland are scarce but show that Norwegian Vikings dominated the Orkney and Hebrides Isles.

## NORTHUMBRIA

■ The target of the Vikings' first attacks and the site of their permanent settlements. The Norse took advantage of internal disputes between local magnates to capture the area. The town of Jorvik (York) developed into a kind of capital for the Vikings. The kingdom was recaptured in 927 by King Æthelstan, but York remained a Viking stronghold until 954 when Eric Bloodaxe was forced to abandon it.

## ISLE OF MAN

■ Norwegian Vikings, in particular, settled on this Celtic island in the late 700s. Over the following centuries, it became part of the Norwegian kingdom, which included the islands along the coast up to Shetland.



## WALES

■ Although the inhabitants of Wales experienced both Viking and Anglo-Saxon raids from 852, the Vikings did not settle there to the same extent as they did in England. Archaeological finds do show Norse traders lived there.

## MERCIA

■ Militarily, the strongest of the kingdoms. In 877, the Vikings managed to take Mercia, but the Anglo-Saxons recaptured it in 954.

## DANELAW

■ In 877, King Alfred of Wessex beat back the Vikings. A treaty was then signed establishing the boundary of the Danish Vikings' territory within Britain – the Danelaw – where Danish laws and customs prevailed. As in Scandinavia, chieftains and free men met at a thing to pass laws and settle disputes. In 917-918, King Edward recaptured large parts of Danelaw.

## EAST ANGLIA

■ According to the Anglo-Saxon Chronicle, in 865, a "great heathen host" conquered East Anglia. Viking dominance lasted until 917 when King Edward expelled the Norsemen.

## WESSEX

■ Wessex was the leading kingdom in the eighth century, and several of its kings proclaimed themselves rulers of all England. Here the Vikings met strong resistance from Alfred the Great, who in 877 expelled the Vikings from Wessex and established Danelaw's border. It was not until a later invasion by Sweyn Forkbeard in 1014 that the Vikings took southern England, which remained under Danish rule until 1042.

● Important cities

— Area of Danelaw

0 100 km

From 865 to 879, the "great heathen host" ravaged England.





## NORSE LANGUAGES SPREAD

Many Nordic words crept into Old English and can still be seen in modern English today.

SCANDINAVIAN	ENGLISH
Kniv	Knife
Plov	Plough
Viv	Wife
Husbond	Husband
Æg	Egg
Vindue	Window
Årle	Early
Sky	Sky
Gade	Gate
Ilde	Ill
Dem	Them

>>>> of godfather, was sealed with a treaty that established the boundary between Alfred's and Guthrum's kingdoms along the Thames to the town of Bedford and from there along Watling Street – the old Roman road between London and Chester.

## A LAND OF VIKING LAW

The area north of this border became known as *Danelagen*, after the Old Norse word for jurisdiction, *lagh*. In English, it was called Danelaw. The territory never became a unified kingdom and repeatedly changed hands between the Anglo-Saxons and Vikings. But in terms of language, law and customs, Danelaw was dominated by the Vikings – especially the Danes.

Here, as in their homelands, the Vikings met at an assembly known as a *thing*, where free men discussed and adopted common laws. The inhabitants of Danelaw also settled disputes according to Norse custom. Court sessions were held at the *thing*, where

12 free men who had sworn to uphold justice passed sentence on an accused person. Historians consider this procedure a precursor to the 12-person jury, which is a fundamental part of British and US legal systems even today. Other concepts from the Danish justice system were also adopted, including *utlah*, which translated into “outlaw” in the local tongue.

It wasn't just warships that landed on England's beaches; Viking cargo ships, known as *knarr*, arrived from Scandinavia with women, children and trade goods. In time, the new Norse inhabitants developed a peaceful relationship with the Anglo-Saxons, and the populations intermarried.

## VIKINGS TOOK LAND

The most significant change brought about by the Vikings was the redistribution of British farmland. Like the Viking chieftain Halfdan Ragnarsson, who, according to the *Anglo-Saxon Chronicle*, distributed land in Northumbria, many other Scandinavian leaders took British land and divided it between their loyal subjects. From ancient times, England's farmland had been parcelled into large landholdings that were held by the royal family, nobility and the Church. And it wasn't just the fields. In Kent, for example, the woodland, coastal waters and salt industry were all controlled by the great landholders, while the monastery on the island of Lindisfarne owned much of northern England's land, which the abbots rented out to locals or managed through trustees. The arrangement was profitable for the owners,

who amassed great wealth while others toiled to cultivate the land.

In addition to carrying out raids, the Vikings also bought up existing landholdings. In Cumbria, there is even a region – Copeland – which is named after the Old Norse word for “bought land”.

## HOLY RETRIBUTION

The result of this redistribution of land can be seen in the *Domesday Book*. The ledger shows that by 1086 large parts of England were in the hands of individuals and that the Church, Crown and nobles only continued to hold substantial tracts in areas unoccupied by Vikings.

The monks at Lindisfarne also had their valuable farmland seized by the Norse. In

914, a Scandinavian magnate named

Ragnald took over the monastery's land and divided it between his two loyal allies, the Viking chieftains Scula and Onlafbal. The Christian Anglo-Saxons saw the seizure as an affront to their faith, and a hair-raising legend soon began to circulate that Onlafbal was made to pay the ultimate price for curtailing the monastery's wealth. The monks claimed that spirit of their patron saint, Cuthbert, tortured the pagan Onlafbal until he converted to Christianity. The Viking was thus able to escape his tormentor, but his relief was short-lived because he dropped down dead immediately afterwards.



Vikings brought amber to the markets of York.

## NORSE INFLUENCED OLD ENGLISH

The Viking land grab is still reflected in Britain's map. The towns that sprang up within Danelaw and other areas with large Norse populations often include Old Norse

Under the Vikings, York grew from a small town to England's second-largest city. There were around 15,000 inhabitants by 1066.



or Danish names. For example, many end in *-by*, meaning "town", such as Derby and Selby. Others have the suffix "ness" after the Scandinavian *-næs*, meaning headland, while *-thorpe*, which translates as "settlement" or "village", shows up in place names such as Danthorpe, which meant "Danish settlement". In Yorkshire, which was densely populated by the Danes in the Viking Age, as many as 210 town names end with *-by*, and 115 with *-thorpe*.

Other city names combined Nordic words with the Old English name ending *-ton*, which translates as "town". Grimston, therefore, means the town belonging to Grimr – which is a Scandinavian name. In other cases, the Vikings changed the Old English words to make them easier to recognise and pronounce. The town of Shipton became Skipton, and Cheswick became Keswick.

Judging from inscriptions found in the Scandinavian areas, the Norse quickly learned to speak the local language. At the same time, however, the Anglo-Saxon language adopted many Scandinavian words. "Wife", for example, derives from the word *viv*. In the past, historians believed that the presence of so many Scandinavian terms in English vocabulary and town names proved that large numbers of Vikings had settled in England. However, modern scholars suggest that the number of Norse migrants was likely to have been relatively low but that those who stayed formed a highly influential elite. The new Scandinavian place names also reflect the fact that, after dividing the land, the Vikings needed new names to keep track of their tax income.

However, Viking influence was not limited to place names and vocabulary. The

Norse also left their mark on settlements, which increased rapidly in size and number. At the start of the Viking Age, England contained no more than 10-15 'towns' as the small clusters of houses were known, several of which were little more than permanent trading posts. By the end of the Viking Age in 1066, there were over 100 towns and several large cities.

#### YORK BECAME A METROPOLIS

In 866, the Vikings captured York, or Jorvik as it was then known. The city was already a trading town and a meeting place for the local elite. It had a three-metre-high city wall, first erected in Roman times, and the inhabitants had since built a harbour on the banks of the River Ouse, where trading ships sailed to and from the continent. But the Vikings turned it into the liveliest of all the Danish trading centres, and it became a kind of capital for the Scandinavian settlers. York

developed into a major city with a population of several thousand.

The anaerobic conditions of York's soil mean that even organic materials in the ground are well preserved. Archaeologists have therefore been able to unearth a wide range of Viking Age relics from beneath the modern city. Their findings show that Jorvik's narrow streets were closely packed together. The inhabitants lived along the road in wattle-and-daub thatched houses built on divided plots marked by fence posts. Other dwellings resembled the longhouses that the Vikings built in Scandinavia; they were constructed without windows, and the only light came from the

*Scandinavian vocabulary made its way into the Anglo-Saxon language and is still used. For example, kniv became knife.*

doors at each end of the house and the hole in the roof for the fireplace's smoke.

#### PARASITIC INFESTATIONS

Each home had its own wide fireplace, which was sometimes fringed by recycled roof tiles from old Roman buildings. Other than that, the houses were sparsely furnished, with earthen benches covered with wooden wicker. Floors were made of bare earth into which rubbish and personal belongings, such as tools and combs, were eventually lost. As the town grew, these primitive single-storey dwellings were extended into two-storey houses built in rows, one behind the other.

Just as they did in their homelands, the Norse kept cows, goats and chickens in their back gardens, which, in addition to the family well, also housed both a cesspit and a midden. The increasingly dirty city took its toll on the health of its inhabitants. Studies of Viking faeces excavated in York show

"The spirit of St Cuthbert tortured the pagan Onlafbal until he converted to Christianity"









## SWEYN FORKBEARD 960-1014

## ENGLAND'S SCOURGE

Sweyn Forkbeard was the son of Harald Bluetooth, the Viking king who unified the Danish kingdom and introduced Christianity. According to the chronicle of Saxo Grammaticus, Sweyn stood up to his father, and the showdown ended with Harald Bluetooth being killed in a battle against Sweyn's forces around 986. Even before that, the Christian Sweyn was a full Viking and had taken part in several raids, including to

England. It was probably there that he began to part his long beard in the middle – a fashionable style in England at the time – which earned him the nickname Forkbeard. After taking the Norwegian crown in AD 1000, he devoted his time to campaigns in England. In 1013, he succeeded in conquering the entire country. He died a natural death a year later.



*Viking king of Denmark – Conquered England – Christian who tolerated pagans*

that the inhabitants frequently suffered from infestations of intestinal parasites. And the filth from the growing urban population meant that the land surface rose by a few centimetres each year.

**CRAFTS AND TRADE GREW**

York's local markets flourished thanks to the Vikings' widespread trade links with Europe and the Far East. The city's stalls were filled with luxury goods: silks and pearls from Byzantium, wine from Germany and amber from the Baltic.

At the same time, the Vikings made York a centre for artisans. The Coppergate district, which had once housed the city's coppersmiths, had been abandoned since Roman times. Now it was transformed into a neighbourhood of workshops thronged with shoppers. Specialist artisans forged weapons and metal tools, bone workers carved flutes and drinking horns, cobblers sewed leather boots, and goldsmiths made jewellery from pearls, amber and precious metals. But the Coppergate neighbourhood was most notable for its production of wooden cups and other tableware, such as bowls and dishes, as evidenced by the discovery of wood shavings and fragments discarded by the carpenters who worked there.

Some historians theorise that the boom in British urban life during the Viking Age was due to the Anglo-Saxons being driven off the land by Norse raiders and settling in towns in search of a new life.

**KING ALFRED STRUCK AGAIN**

After the Treaty of Alfred and Guthrum formalised the border of Danelaw, new invading Vikings found it more challenging to gain a foothold in England. The Anglo-Saxon monarch put all his efforts into beating back new Scandinavian forces. And increasingly, the conquering Vikings had to turn back.

In 892, a large Viking army turned towards England after a failed raid on Boulogne. Led by, Hastein – a notorious

Danish chieftain who had reportedly already raided parts of Spain, North Africa, Italy and France – hordes of conquering warriors crossed the Channel. They landed on the southern coast of mainland Britain.

King Alfred was prepared. Since signing the treaty, he had fortified his territories with a number of *burhs*. Some of these fortresses were new, while others, like the one in Winchester, were built on the remains of Iron Age or Roman strongholds. The king had also reorganised his army so that half the available military levy was always ready to go to war. Alfred the Great also built a fleet to confront the Vikings.

**VIKINGS FORCED TO RETREAT**

The defences beat back the newly arrived Vikings, and the Norse had to abandon their raid. Some settled in East Anglia and Northumbria; others returned to Normandy.

"The host, by the mercy of God, had not altogether crushed the English people," the *Anglo-Saxon Chronicle* concluded with relief.

While new would-be invaders were beaten back by King Alfred's army, the Norse already settled in Britain lived in relative peace with the Anglo-Saxon population, even when the British recaptured the Danelaw territory in 917-918. Alfred's heir, King Edward the Elder, hired both Danes and Anglo-Saxons to man his fortress at Nottingham, and, according to the *Anglo-Saxon Chronicle*, both populations happily swore allegiance to their new ruler.

**FRESH PICKINGS IN EAST**

Historians estimate that the peace of the ninth century was helped by the fact that Norse warriors with a taste for riches tended to head east at that time. Along the Volga River in Arabia and the Byzantine Empire, land, silver mines and lucrative trading markets beckoned. But by the end of the tenth century, Arab silver mines had

been tapped out, and trade in the east was dying.

Once again, the Scandinavians turned their gaze to the green landscapes of the west. In 991, a huge fleet of more than 90 ships arrived, led by the Danish King Sweyn Forkbeard and Olaf Tryggvason, who would go on to become King of Norway. The warriors plundered far and wide in England. And the sight of Viking ships arrowing in from the horizon evoked grim memories of murder, pillage and looted monasteries among the locals. So, the British dug into their coffers >>>

**In 1976-81** archaeologists excavated Coppergate, the Viking artisan quarter of York.

Archaeologists have found Norwegian chess pieces on the Isle of Lewis in Scotland.



*In the tenth century, the Vikings invaded England for the second time. King Sweyn Forkbeard led the way.*



# “ Their bones show that the men were chopped down from behind ”

>>> in the hope that they would be able to pay for peace.

“In this ... year, it was decided for the first time to pay tribute to the Danes on account of the atrocities they wrought along the sea coast. On this first occasion, it amounted to ten thousand pounds,” the *Anglo-Saxon Chronicle* noted in its entry for 991. It was the first of a series of Danegeld payments – a type of protection money that the British were forced to pay the Vikings to prevent them from raiding the kingdom. Three years later, in 994, the two Viking chiefs returned with a force of 94 ships. Following unsuccessful attempts to take London, the hordes ravaged the outlying areas so brutally that the Anglo-Saxons paid them 16,000 pounds of silver and supplied their vessels for the trip home to be spared further violence. As part of the deal, Olaf Trygvason agreed to be confirmed in the Christian faith and never to raid England again. He kept his promise until his death in the year 1000. But they didn’t get rid of King Sweyn Forkbeard so easily, and he quickly became notorious as Britain’s new tormentor.

## ÆTHELRED VERSUS THE VIKINGS

In 1002, King Æthelred the Unready paid the Danes 24,000 pounds for a truce. However, when rumours of an assassination plot against him began circulating, the English monarch had had enough. He issued a decree that all Danes, men or women, young or old, were to be expelled from Anglo-Saxon territory. A royal charter from 1004 declared that “all the

*Archaeologists’ discovery of the skeletons of 35 men suggests that Danes tried to flee the St Brice’s Day massacre.*

Danes who had sprung up in this island, sprouting like cockle amongst the wheat, were to be destroyed by a most just extermination ... even as far as death.”

Historians do not believe that the order was intended to wipe out every person of Danish descent, but Æthelred’s revenge certainly thinned out the Viking population. He also ordered the murder of Sweyn Forkbeard’s sister and her husband, Pallig Tokeson, who had been in English service but had later joined the Vikings. The deaths were carried out in a bestial fashion. According to various accounts, including from Æthelred himself, a group of persecuted Danish Vikings were burned alive after seeking shelter in the church of St Fridewides in 1002. Æthelred’s pitiless supporters found the Danes and set fire to the church.

Archaeologists have also found 35 skeletons of men aged 16 to 25 in the same area. Their bones show that the men were chopped down from behind, leading the team to conclude that they are the remains of Vikings fleeing Æthelred’s massacres. However, the murders did nothing to deter Sweyn Forkbeard, who continued his rampage unabated.

## ATTACKED WITH BONES

His well-equipped longships arrived more frequently, the attacks spread over more extensive areas, and Sweyn Forkbeard collected ever more staggering sums in Danegeld. In 1006, the Danish king managed to wring as much as 36,000 pounds of silver out of the embattled Æthelred. The easy protection money lured more Scandinavians across the North Sea, and the Vikings were merciless if the Anglo-Saxons didn’t pay.

In 1011, they sacked the city of Canterbury, capturing Archbishop Ælfheah. According to the *Anglo-Saxon Chronicle*, when the eminent cleric refused to let the ransom be paid on his behalf, the Norsemen, drunk, following a sumptuous feast, set upon him. They began pelting the archbishop with bones and the heads of cattle before one Viking grabbed his axe and brought the blunt end crashing down on to Ælfheah’s head.

“His holy blood fell upon the earth, and his holy soul was sent forth to God’s

kingdom,” the *Chronicle* stated. In 1012, Sweyn Forkbeard sailed home with 48,000 pounds of silver, but when the king returned the following year, he wanted more than money. Sweyn Forkbeard wanted the kingdom itself. The Vikings’ second invasion of England had begun.

## FIRST VIKING KING TO RULE ENGLAND

The *Anglo-Saxon Chronicle* recorded the event: “Before the month of August, came King Sweyn with his fleet to Sandwich, and very soon after went round East Anglia into the mouth of the Humber, and up along the Trent until he came to Gainsborough.”

It wasn’t long before the Viking king had subdued the inhabitants of Lindsey in Northumbria and all the great towns that had previously been part of Danelaw. Sweyn Forkbeard took hostages and ransacked horses from every shire, along with valuables and fresh provisions for the warriors. Then he headed south to Oxford and on to London, achieving what no Viking had managed before: he conquered Wessex in southern England, driving out King Æthelred, who was forced to take



## EYEWITNESS

ÆTHELRED / Anglo-Saxon king, AD 1002

## MASSACRE OF THE VIKINGS



“ Those Danes who dwelt in the aforementioned town [Oxford], striving to escape death, entered the sanctuary of Christ, having broken by force the doors and bolts, and resolved to make a refuge and defence for themselves there in against the people of the town and the suburbs. But when all the people in pursuit strove, forced by necessity, to drive them out, and could not, they set fire to the planks and burned, as it seems, this church with its ornaments and its books. ”





refuge in Normandy. Sweyn Forkbeard was proclaimed king of the newly conquered territories, but his reign was short-lived. A year later, on 3rd February 1014, he died.

The throne consequently passed to Sweyn Forkbeard's son Cnut, who had accompanied his father on the expedition. However, his rule over England didn't seem likely to survive for long. Æthelred gathered an army and returned from Normandy to drive out the Danes. Cnut had to flee to Denmark, but he put his Anglo-Saxon hostages ashore before he left. Every one of them had been savagely mutilated: Cnut's men had cut off their hands, noses and ears. It was a clear message that the Vikings would not be covered by Æthelred.

In Denmark, Cnut gathered his warriors and set off again for England the following year. This time, he would not be content to shame his enemies. In a bloody battle at Assandun in 1016, Cnut eviscerated the English nobility and defeated Æthelred's son and heir, King Edmund Ironside.

A beaten Edmund agreed to make Cnut co-regent. But even this humiliating status

didn't last long; before the end of the year, Edmund had died, and Cnut – who became known as Cnut the Great – was left as the sole ruler of England.

#### CNUT ATONED FOR VIKING SINS

Under Cnut's reign, Viking influence in England peaked. According to the 13th-century *Knýtlinga Saga*, the king, who was

“exceptionally tall and strong, and the handsomest of men”, secured peace in his territory by turning the four former kingdoms into earldoms and appointing his most loyal supporters as magnates. Cnut himself ruled the wealthiest and most important kingdom, Wessex.

As the new king, Cnut tried to restore trust between Vikings and Anglo-Saxons by righting the wrongs of the past. The body of Ælfheah, the archbishop shamefully murdered by Danish Vikings in 1012, was taken with lavish ceremony from London to Canterbury, where the bishop was given a fitting burial. And on the site of the bloody battle of Assandun, Cnut built a church. In proclamations to the Anglo-Saxon people, Cnut portrayed himself as a guarantor of peace and freedom from further Viking attacks – he did not want his position of power threatened.

Cnut's strategy of seeking public favour and military security worked, and by 1019 the king was sufficiently safe on the throne that he could return to Denmark to secure his power base there. In 1027, the Scottish king also submitted to the Danish monarch, and in 1028, he succeeded in seizing power over Norway. Cnut, who had married King Æthelred's widow, Emma, could finally proclaim himself “King of all England and Denmark and the Norwegians and of some of the Swedes”.

#### VIKING KINGS DISAPPEARED

When Cnut died in 1035 at the age of 40, the power of the Danish Vikings in England began to crumble. Cnut's four children all died without issue. According to the *Anglo-Saxon Chronicle*, Cnut's heir, Harthacnut, “died as he stood: at his drink” and never did anything “worthy of a king”. On Harthacnut's death, the throne passed to Edward, son of Cnut's widow, Emma, and King Æthelred.

With Edward's rise to power, both Viking rule in England and the Viking Age as a whole ended.

However, the demise of the Viking royal line did not mean that the Scandinavian inhabitants disappeared from the British Isles. The Vikings' descendants continued to live in Derby, Danthorpe and other towns where their customs and traditions had long been integrated into Anglo-Scandinavian society. ■

#### TECHNOLOGY

#### CULTURE

#### ECONOMY

#### DAILY LIFE

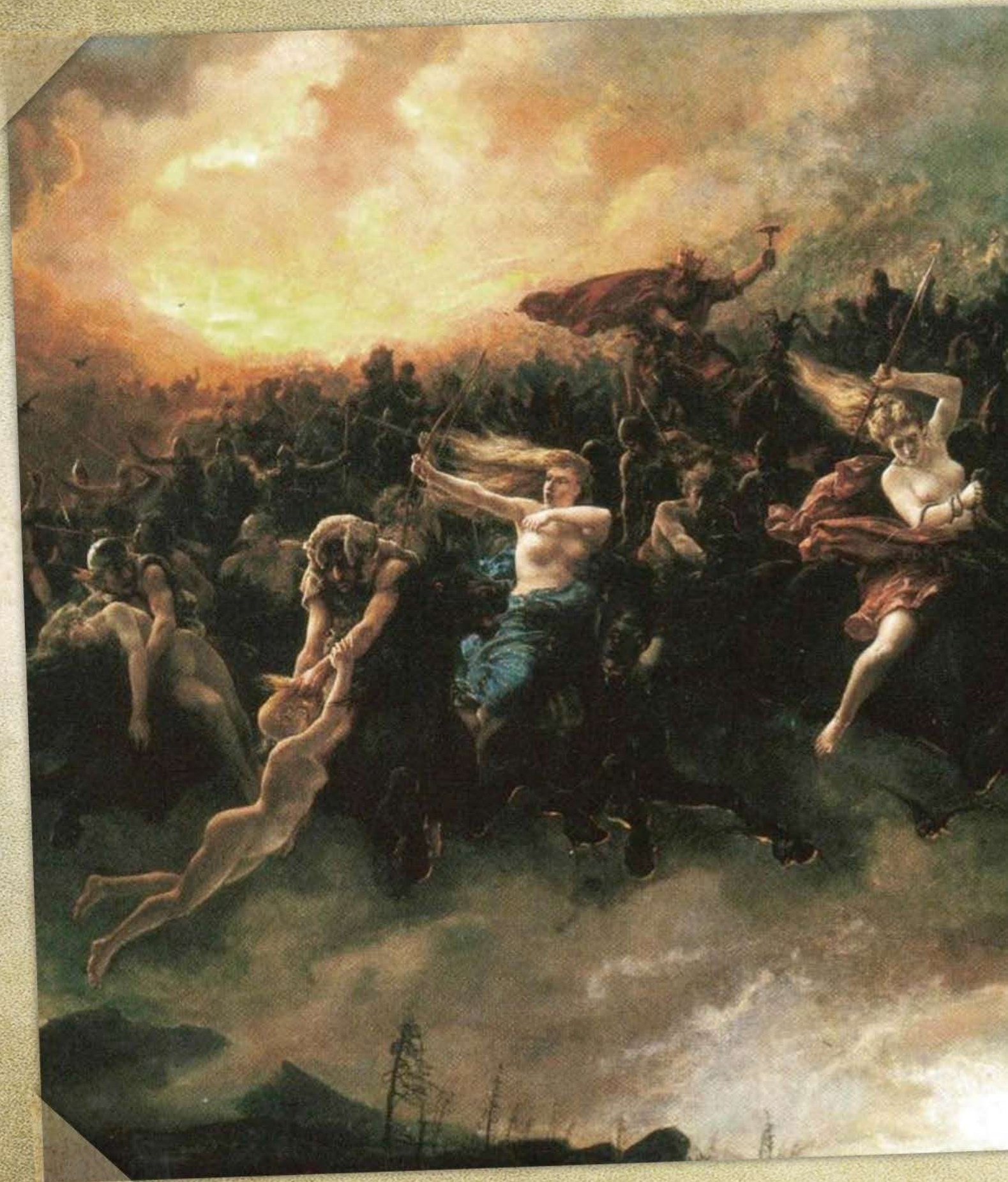
### Sagas warned against Scotland

Despite their reputation for brutality, the Vikings were wary of venturing into Scotland – 13th-century Icelandic sagas based on older accounts provide advice based on Viking experiences. They warned that while Scotland's

monasteries were rich in silver, the country's foggy coastline was treacherous and the inhabitants warlike. It concluded that “Icelanders who want to practise robbery are advised to go there ... but it may cost them their life.”











# THE NORSE GODS



The Viking world of gods was full of superstition and rituals. The sacrifice of boars and stallions ensured a good harvest, while amulets protected against storms and unknown dangers. But despite the Vikings' everyday concerns, every warrior dreamed of the same thing: to die an honourable death and end up in Valhalla – the hall of the gods, where there was an endless supply of mead and pork.



**Ash Yggdrasil:** The sacred tree was surrounded by the nine worlds that the Vikings believed existed, including Midgard of men and Asgard of the gods.



**Heimdall:** The guardian of the gods and the rainbow bridge Bifröst, Heimdall could see for a hundred leagues and hear the grass grow. If giants came, he blew the Gjallarhorn to warn the gods.



**Midgard:** According to Viking mythology, humans lived in Midgard, the middle world. It was surrounded by a wall that separated it from the chaotic Utgard of the giants.

◀ **Thor:** With his formidable physique, the god of thunder was the strongest and most admired of the gods. He fiercely defended Asgard and Midgard from the giants and was also considered a protector of travellers.





**Freyja:** The goddess of love watched over fertility, birth and death. She haunted the battlefields and shared the dead warriors with Odin. They then took up residence in her hall, Fólkvangr.



**Freyr:** Freyja's twin brother, Freyr, was also the god of fertility. At the winter solstice, the Vikings sacrificed stallions or boars to him for a good harvest.

**Mjöltnir:** Thor's mighty hammer, Mjöltnir, always returned to the god's hand. The Vikings wore a small amulet in the shape of the hammer to provide protection against storms and other dangers.



## THE MOST IMPORTANT GODS

■ Belief in gods and giants permeated Viking life. They were convinced, for example, that Thor really rode across the sky in his chariot and spread lightning and thunder. Before the Vikings went to war, they made offerings to Odin – the mightiest of the gods – while stallions and boars had to die to satisfy the fertility god Freyr and ensure next year's harvest.



**BIGGEST** Odin was the most feared god. He was worshipped for nine days every nine years, with nine sacrificial animals of each species.



The enormous giants were considered stupid and ugly, yet terrifying.

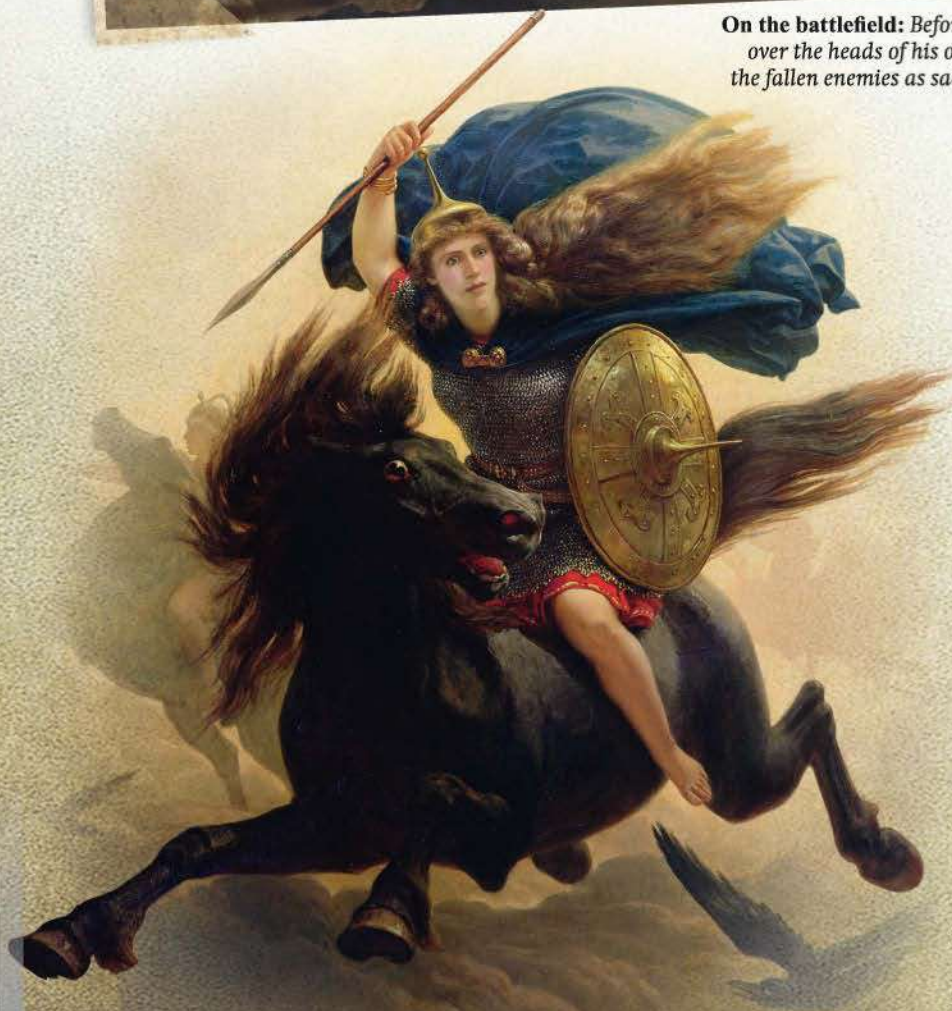


Cunning Loki had a giant for a father, but became Odin's blood brother and moved to Asgard.





**On the battlefield:** Before a battle, the Viking leader rode forward and threw his spear over the heads of his opponents, shouting "Odin take them all!" The words dedicated the fallen enemies as sacrifices to Odin, whose weapon was the magical spear Gungnir.



**Dishonour:** A Viking who died in his bed was condemned to languish for eternity in the netherworld of Hel – a cold, dark underworld.

**Valkyrie:** The name means chooser of the slain. According to myth, the Valkyries brought heroic dead warriors on horseback from the battlefield to Odin's hall, Valhalla.





**Gravestones:** The Vikings honoured their dead with rune stones. This gravestone with rune inscriptions dates from around AD 1030 and was found in London.



**Funeral:** A dead chieftain would be burned on his ship along with supplies and weapons to send him straight to the next world. After, his survivors would build a burial mound in his memory.

## THE WAY TO THE AFTERLIFE

■ Vikings wanted to die honourably on the battlefield, so they would be taken to Odin's hall, Valhalla. They were given animals, weapons, servants, food and drink to take to the grave – possessions they'd need in the afterlife. Much-loved folk were buried near their homes, in the hope that they would protect those left behind, while rogues were buried somewhere remote, for fear that they would haunt the living.

**Packed lunch:** Vikings believed they lived on in the afterlife. Therefore, the dead were given food and drink for their journey.



**JOURNEY** Viking women were buried with their jewellery and household items as the Vikings believed they'd need them in the next life.

Warriors were given weapons and helmets to fight the giants at Ragnarök.

Dogs, cows, chickens, horses and even servants were killed and put in the grave to travel with the dead.



**Odin's heroes:** For every Viking, the goal was to gain access to the omniscient and feared Odin and his hall, Valhalla. Vikings would rather sacrifice their own lives to Odin than surrender to the enemy.



**Golden shields:** Valhalla's roof was covered with magnificent shields that cast a golden glow over the hall.

**Valhalla's gates:** According to the sagas, Valhalla had 540 gates, each so large that 800 men could pass through at once, side by side.



**FEAST** Sæhrímnir the pig provided meat for the hungry *einherjar*. It was slaughtered every night and miraculously revived every morning.



Heiðrún the goat stood on Valhalla's roof and ate Yggdrasil's leaves. From its udder flowed mead, not milk.

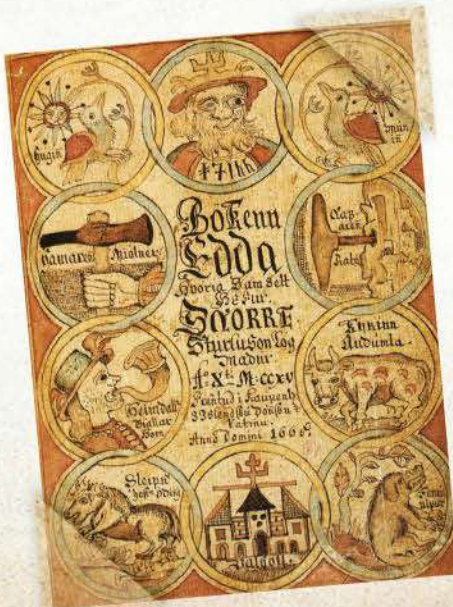


The warriors drank mead – an alcoholic drink brewed from honey and herbs.





**Hero's death:** Only warriors who excelled in battle or died in a holmgang – a duel between two men – were chosen by Odin to enter Valhalla.



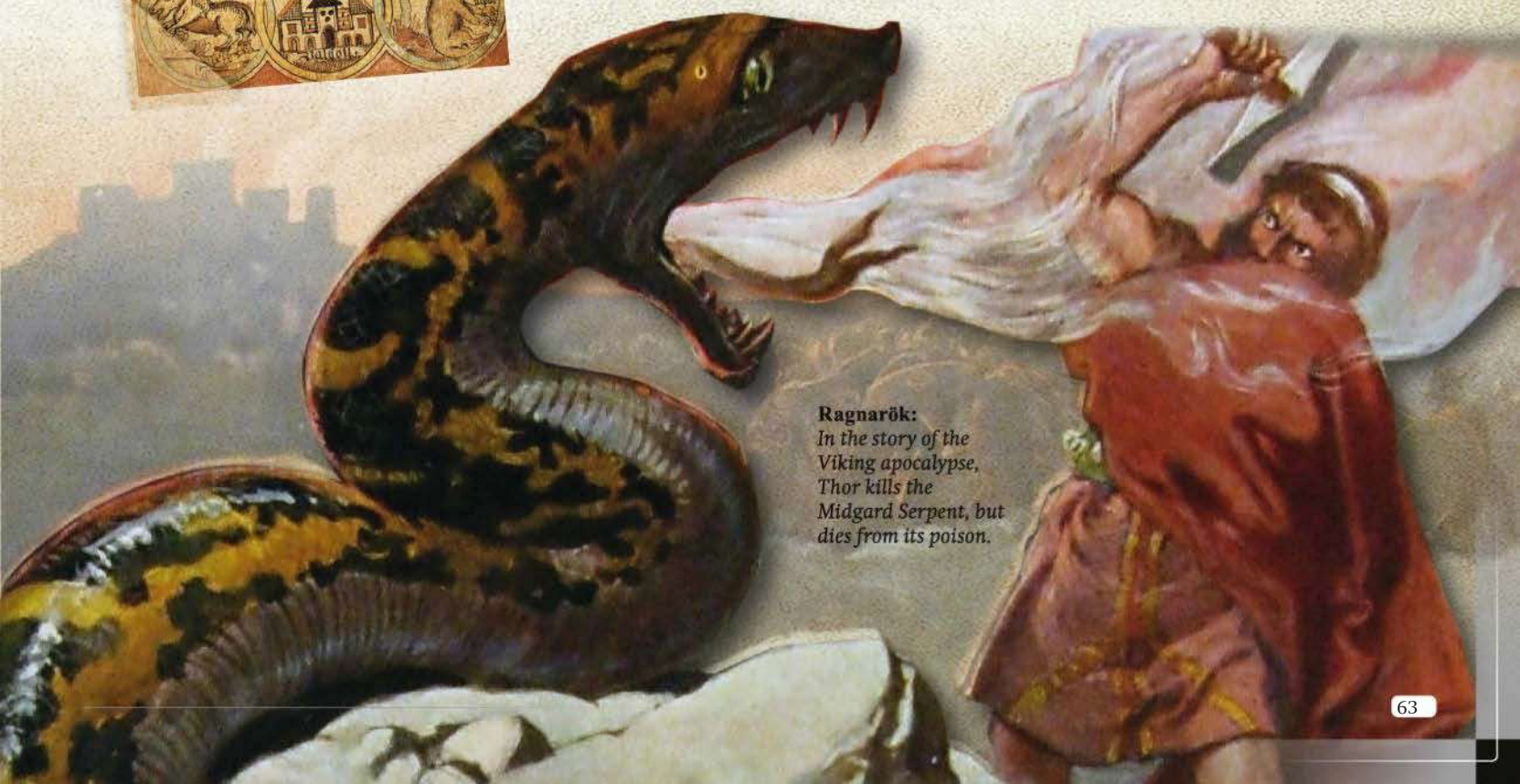
◀ **Snorri's Edda:** Norse mythology was retold by the Icelandic author Snorri Sturluson in about AD 1220.

## LIFE IN VALHALLA

■ The fallen warriors brought by the Valkyrie to Odin's hall, Valhalla, were called *einherjar*. Here they were destined to fight on the side of the gods against the giants at the end of the world, Ragnarök. Every day, the heroes fought each other. When evening fell, their wounds healed and they were ready to eat and drink late into the night, with endless amounts of mead and meat, and skaldic tales of the good old days.



▲ **Daily battles:** In Valhalla, the heroes trained hard because they had to fight alongside the gods at Ragnarök, the Viking doomsday.

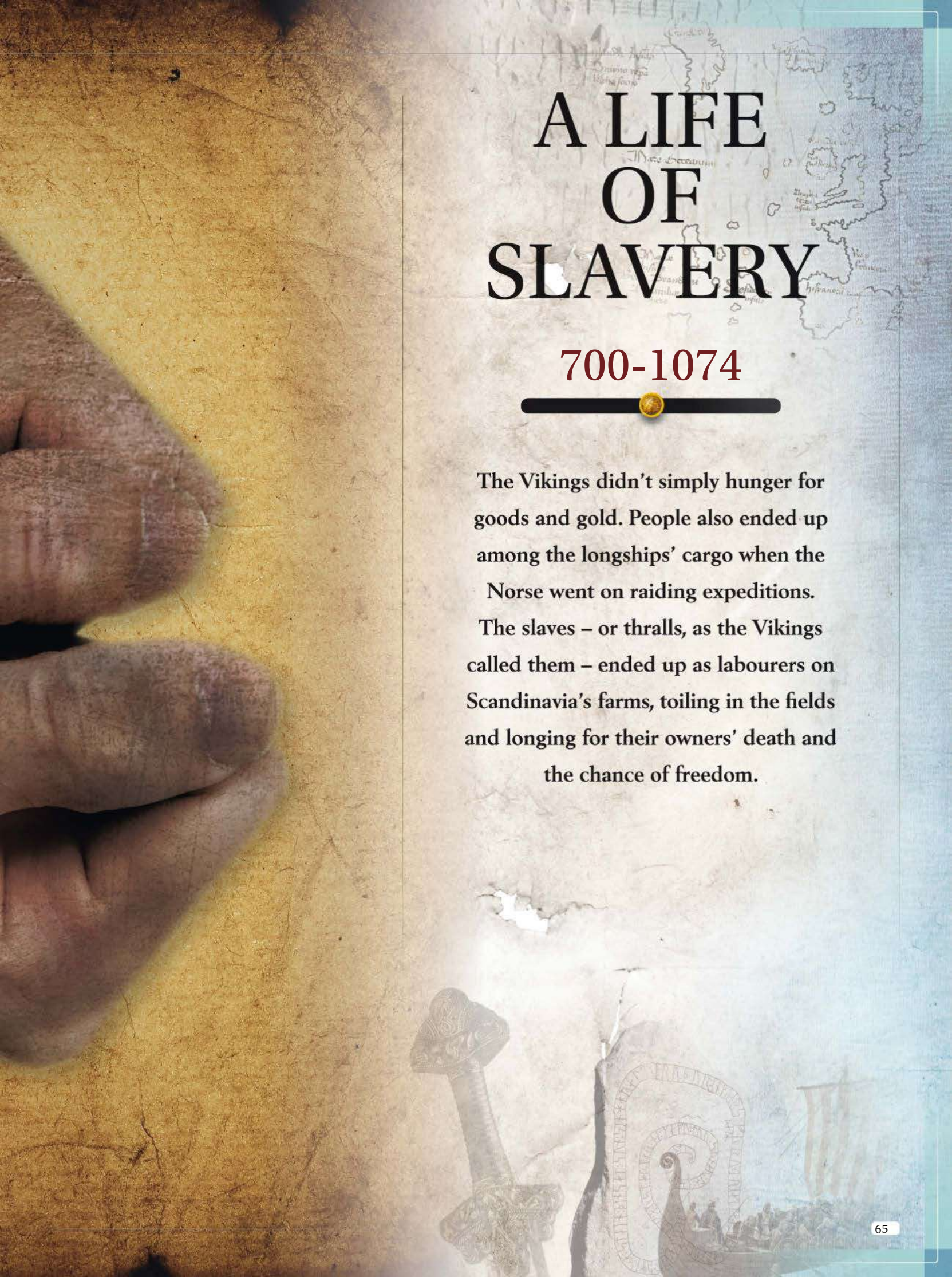


**Ragnarök:** In the story of the Viking apocalypse, Thor kills the Midgard Serpent, but dies from its poison.









# A LIFE OF SLAVERY

700-1074

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The Vikings didn't simply hunger for goods and gold. People also ended up among the longships' cargo when the Norse went on raiding expeditions.

The slaves – or thralls, as the Vikings called them – ended up as labourers on Scandinavia's farms, toiling in the fields and longing for their owners' death and the chance of freedom.



## 700-1074

**700** Islam's expansion creates a need for slaves from the north.

**c.800** Vikings bring the first slaves to England.

**c.950** The slave trade flourishes along Russia's major rivers.

**c.970** Estonian pirates enslave Olaf Trygvasson.



**1074** Adam of Bremen writes about slave-raiding in Scandinavia.

700 >>> 800 >>> 950 >>> 970 >>> 1074 >>>

There's a slate stone on the Scottish island of Inchmarnock that paints a bleak picture. Carved into the soft stone are the outlines of a Viking. His long hair sticks out on all sides. His face is contorted in what looks like a grim smile. The broad shoulders are covered in solid chain mail, and the warrior pulls a man after him with a chain. He is heading for a longship that lies waiting with its oars in the water. Soon the chained prisoner will be taken across the sea, away to a life of servitude.

The tablet depicting this scene was uncovered in 2001, and historians have described the find, which they have dated to the last year of the eighth century, as nothing short of sensational. The stone relief is the only true eyewitness account of one of the most brutal events of the Viking Age – the dreaded slave raid.

#### MONKS AS SLAVES

On Inchmarnock – an island that today epitomises

peace and tranquillity with its only inhabitants a permanent colony of herring gulls and a flock of wintering greylag geese – the Vikings' hunt for slaves took its toll on the local monks. As elsewhere, slave traders abducted both warriors and local civilians. Capturing slaves was a regular feature of Viking raids. Like the other valuables taken as Norse booty, slaves were either taken home or resold in marketplaces on their way to Scandinavia.

**The word thrall** originates from Proto-German and originally meant either servant or runner.

Whether the Viking resold his catch abroad or at home in one of the Nordic slave markets, the slave trade was a lucrative business. The slave himself paid the highest price, for a Viking slave had no identity and no rights. Indeed, the Vikings called their slaves "thralls" – a word that simply means "unfree man".

Viking slaves did not only consist of prisoners of war or kidnapped women – some were locals sentenced to slavery as punishment for a crime. Others volunteered for a life of servitude if they'd fallen into insurmountable debt or couldn't feed themselves. Most slaves toiled their lives away doing the heaviest, most unpleasant and



The 13th-century Laxdæla Saga features Olaf the Peacock, the son of a slave woman, who became one of the wealthiest chieftains in Iceland.

dirtiest work on their Viking owner's farm – and even those few who achieved more privileged jobs were completely at the mercy of their masters. But while their life may have been inhuman, few wanted to follow their master or mistress to the grave – a fate that befell thousands of thralls.

#### ONE IN TEN FRANKS WAS A SLAVE

At the beginning of the Viking Age, slavery was common throughout Europe – including Scandinavia, where slaves were mainly native northerners whose status was passed down from generation to generation in what resembled a caste system. But unlike the Frankish Empire, for example, where up to one in ten people were slaves, they made up a very small proportion of the





population. That percentage was soon to explode, however.

One of the first things Viking raiders did was trade in slaves. The Muslim conquest of North Africa and most of Iberia boosted the demand for thralls. The introduction of Islam effectively ended the supply of African slaves. Until then, wealthy North African and Spanish men had been able to enslave free men on demand. This was the fate of children abandoned by their parents. But the new Muslim regime demanded that slaves in future must either be born to slave parents, captured in war or purchased.

As Muslim territory expanded, wars in which African slave traders could enslave the losers ceased, and African merchants had to buy slaves from outside. And so they turned their sights northwards, where the Vikings were quick to satisfy the Arabs' need for forced labourers.

#### GODS HELPED WITH THE SALE

Slaves from the Baltic region quickly became particularly popular in Spain. Ibn Rustah, a Persian geographer and explorer who encountered the Vikings along the Volga rivers in the tenth century, recorded how they took men and women slaves by the hundreds after defeating a local tribe.

From the moment the enemy was put in chains, he or she was completely at the mercy of the Vikings. Arab diplomat Ibn Fadlan, who met the Norse slave traders along the Russian rivers, said that every morning recently captured slave girls brought bowls of water for the slave traders to wash themselves. Ibn Rustah also noted that the Vikings "treat their slaves well".

The Vikings chose to keep some slaves for themselves, but the majority were

returned to their tribe for ransom or sold on. For the merchants, slaves were a commodity like any other, and just as when they had to sell sable skins or amber, the Vikings sought the favour of the gods before selling them. Ibn Fadlan reported that at the Volga he saw merchants throwing themselves at the feet of idols to ask for a good price for their slaves.

#### ONE SWORD COST SIX SLAVES

When the merchants arrived at one of the many markets, the human trafficking began. Most often, as we know from the African slave trade of the 18th century, the slave was chained up for viewing and sold to the highest bidder. But at other times the slave was traded from one person to another. Prices were therefore negotiable, but in general strong male slaves cost more than women and children. At the same time, the price of highly specialised workers – as we know from the Roman Empire

– was significantly higher than that of a "common" slave.

A few sources have attempted to calculate the prices of Viking Age trades, and there is evidence to suggest that a male slave was slightly cheaper than a horse and one-sixth the price of a well-made sword.

#### HIGH DEMAND FOR BALTIC SLAVES

While trade in the east was mainly conducted by Swedish Vikings, Danes were dominant in the west. Here too, slave markets flourished and gradually became a regular feature in all major cities, including London, *Jorvik* (York) and Hedeby in Denmark. The Danes mainly brought in slaves from Germany, France and England, but they did not hesitate to put their Norwegian brethren or their own countrymen in chains. Adam of Bremen wrote that the Norwegian king Harald Hardrada hunted female slaves on the Danish islands of Zealand and Funen.

Moreover, the chronicler wrote that the Vikings "pay tribute to the

Male slaves could be bought for around 300 grams of silver, while women cost 200 grams.

The earliest Viking raids secured both silver and – more importantly – precious slaves for wealthy Scandinavians.



# “ Harald Hardrada hunted female slaves on the Danish islands ”

“ Danish king for leave to plunder the barbarians who live about his sea in great numbers ... They have no faith in one another, and as soon as one of them catches another, he mercilessly sells him into slavery ”.

Although Adam of Bremen was known to exaggerate, it was true that anyone risked being captured and enslaved by Vikings in search of wealth. According to Snorri Sturluson, Olaf Trygvason, later King of Norway, was captured as a young man by the Vikings and enslaved before later being ransomed. Around the turn of the millennium, during Ethelred the Unready's reign, increasingly successful Danish raids saw a boom in the trade of English slaves.

## TWO SLAVES PER FARMER

Slaves from the British Isles were most often gathered at Bristol and from there sent in all directions. For some, the journey was across the English Channel along the River Seine to Rouen, the capital of the Norman Empire, where they became house slaves. Others were transported to Dublin, where the Vikings had a port. From there they were shipped to Scandinavia, Iceland or more distant places like Muslim Spain.

Those slaves not sold on foreign slave markets ended up in Scandinavia. Historians

believe that slaves were quite common and that farmers, large and small, kept thralls to boost their household labour.

The richest Scandinavians, however, could afford to hire far more slaves. In the *Separate Saga of St. Olaf*, Snorri Sturluson tells of a great man who possessed 30 slaves on his farm. The fact that the Icelandic chronicler mentions the number suggests it was an unusually high figure, and most Scandinavians probably possessed far fewer. This theory is supported by the fact that archaeologists have never found any slave dwellings at Viking farms. Instead, the slaves lived either alongside their masters in the longhouse or in pit houses – small, primitive, half-buried huts built outside the main dwelling. Only in Iceland have archaeologists found anything resembling an actual house for thralls in a early tenth-century settlement.

## OLD THRALLS WERE MURDERED

Life was forever changed for prisoners who found themselves enslaved in a foreign land. The owner had full control over the slave's life, and although certain laws restricted the owner's right to kill his slave, Viking farmers were free to murder old thralls who could no longer work well into the Viking Age. However, according to the Icelandic Grey Goose Laws collection, the advent of Christianity meant such killings were outlawed during holy festivals.

In any case, the thrall was a regular part of everyday life. Society was strongly

*Viking servants were forced to wear light-coloured clothes. The colour white symbolised low status.*

## SLAVES ACTED AS WET NURSES AND CARRIED WATER

*Viking slaves were a kind of jack-of-all-trades, able to dig peat and grind salt. Although the vast majority lived a miserable life, a few managed to work their way to the top and become an extension of their master's arm.*

### HOUSE SLAVE:

■ Most female slaves ended up as house slaves. Here they were responsible for all the kitchen work, and not least the hard work of grinding the Vikings' rye and barley into grain. At the same time, they milked the livestock, washed clothes and acted as nannies and wet nurses.

### FIELD SLAVE:

■ Male slaves were assigned the physically hard, dirty work in the fields and stables. They laboriously harvested the grain fields with stone sickles and tended the farm's pigs, goats and geese. As winter approached, the field hands were sent out into the northern bogs to dig peat.



*The work of grinding grain was done with heavy grinding stones.*



hierarchical, with the magnate or chief at the top of the heap. Below him were freemen, peasants, tradesmen and craftsmen, and at the bottom, came the slaves.

As the Viking Age progressed, power was concentrated among fewer and fewer chieftains, until eventually kings ruled over the Scandinavian lands. For the slave, however, the changes had no impact. Throughout the Viking Age, they were assigned the hardest, most unpleasant and filthiest work.

Male slaves worked mainly in the fields. 'Rígsþula', a poem from the *Poetic Edda* that historians believe reflects the Viking Age division of labour and social order, tells of the slave that "bind bast ropes, burdens to pack, to bear faggots home the whole day long". Other slaves "put dung on fields, fattened the swine, herded the goats, and grubbed up peat". At the same time, female slaves toiled in the pit houses grinding grain and salt, milking livestock, churning butter, washing clothes, caring for children, nursing, cooking and hauling water. When the wool had to be spun or the fields sown, everyone pitched in, just as they helped to bring in the harvest and slaughter the livestock that would ensure food through the winter.

#### SLAVES WENT TO THE TOP

Not all servants, however, were engaged in hard and unpleasant work. Rune stones reveal that some thralls were entrusted with specific tasks, such as the Swedish slave Tolir, who sometime in the middle of the 11th century had a stone erected at the royal farm on the island of Adelsö by the king's command. Tolir was depicted on the stone as *bryti* – a title that historians believe originally meant someone who breaks bread, that is, the slave who was entrusted with distributing food to other slaves.

The mention of a servant on a rune stone is remarkable, as normally only magnates,

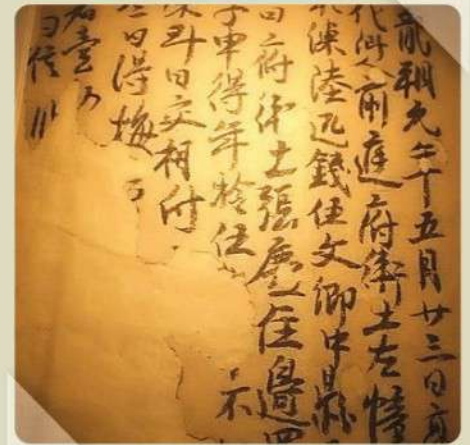
"Rune stones reveal that some thralls such as the Swedish slave Tolir, were entrusted with specific tasks."

#### CHINESE BOUGHT FEMALE SLAVES FROM KOREA

While the Vikings did not object to using other northerners as slaves, the idea of enslaving fellow countrymen was anathema to the Chinese. The empire punished anyone who tried to sell a Chinese person into slavery with death.

The Chinese, on the other hand, had no qualms about enslaving prisoners from military campaigns, and as the country also suffered from a shortage of women, slave traders frequently imported Korean women, who were favoured for their fine features.

As in Scandinavia, slaves were deprived of any right to determine their own lives and future destinies.



chieftains or others from the upper echelons of society were recorded. This has led some to suggest that the term *bryti* evolved during the Viking Age to mean steward, and that slaves may in some cases have worked their way up to become highly trusted officials.

*Bryti* may have had a female counterpart, *deigja* (bread kneader), but scholars disagree about the actual meaning of the word and what level of tasks were entrusted to them.

No matter how high slaves reached, they still had one thing in common with their fellow

thralls: a life without rights. Slaves were not allowed to marry, and newborn offspring were often frowned upon by the slave's owner. Historians believe that during periods when Vikings could easily obtain prisoners of war, it was both easier and cheaper for owners to import new slaves than to raise their own slaves' children.

Some scholars even go so far as to say that during Iceland's early years of

Viking occupation, most of the children of slaves were left in the wild to die. When Iceland converted to Christianity in 995 under pressure from the Norwegian King Olaf Tryggvason, the right to abandon children was one the Vikings were particularly reluctant to give up.

#### WITH HIS MASTER IN DEATH

Nowhere, however, was the brutal treatment of slaves more evident than in the burial customs of the time. When a wealthy man or woman was buried, he or she took large



#### BREAD KNEADER:

■ The most skilled house slaves were given the title of *deigja* – she who bakes the bread of the house. The name came from the word dough. Some historians believe that the *deigja* was a kind of housekeeper.

#### OVERSEER/BRYTI:

■ The overseer went by the name of *bryti*. A slave himself, he was responsible for watching over the other slaves. For this reason, *bryti* were only found on larger farms that had many slaves. In later Viking times, the term *bryti* was applied to stewards on royal estates.

*The word bryti sometimes appears on rune stones, like this one in Hovgården near Stockholm.*







**BURIAL:**  
The most powerful chiefs were accompanied in death by slain slaves who could serve them in Valhalla.

**SLAVE MARKET:**  
Slaves – like other commodities – were sold at market to the highest bidder.

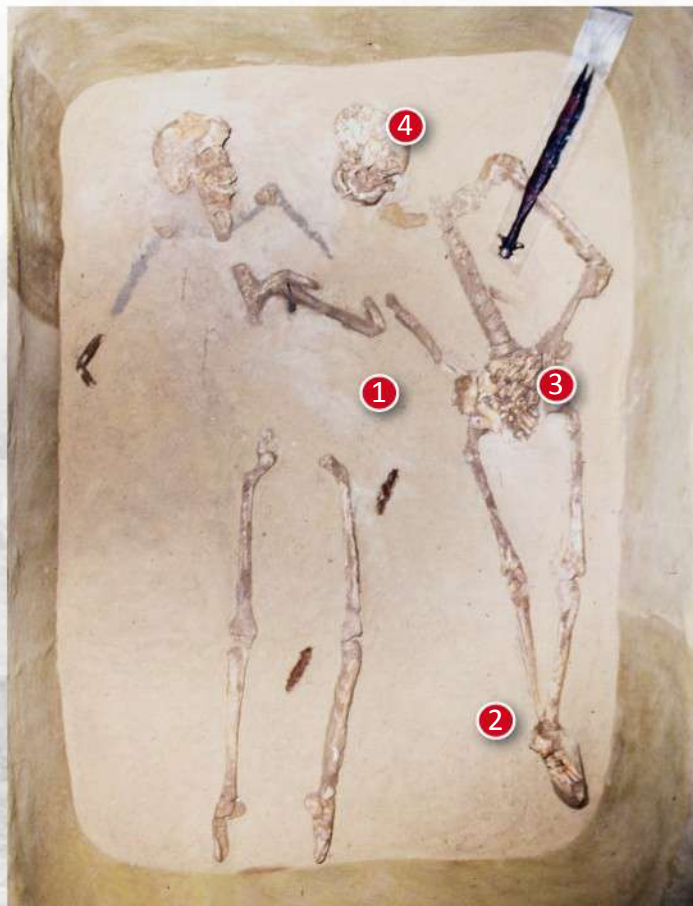


quantities of goods with them to the grave. The Vikings' belief in an afterlife led them to bury everything they might need in the next world alongside them: food, cooking and eating utensils, and possibly a boat or horse for transport. At the same time, the value of grave goods served as a status symbol. The deceased's family wished to demonstrate

they could afford to sacrifice considerable riches. These valuables included slaves, and in several places in Scandinavia as well as closer to home on the Isle of Man, archaeologists have excavated double graves where one of the deceased appears to have suffered a violent death. For example, Danish archaeologists at Stengade on the

Danish island of Langeland have found a grave where a man is buried next to another man. One of the dead was bound at the feet, with his head slightly removed from the body. Historians believe he was a slave who was beheaded so he could go to his death with his master and be of service to him in the afterlife.

- 1 In a Viking grave near Stengade on Langeland, archaeologists found two men buried side by side. The one on the right was probably a slave who died with his master.
- 2 The victim's feet were tied together with rope before being laid in the grave.
- 3 The victim's hands were also bound.
- 4 The head was slightly displaced from the body suggesting it was cut off and placed in the grave afterwards.



### WOMEN WERE RAPED

While scholars are certain that Vikings often killed their slaves and subsequently buried them with rich Vikings, there are still doubts about the rituals that culminated with their murder.

Ibn Fadlan, the Arab diplomat who encountered Vikings along the Volga River in the early tenth century, told of a Viking funeral where a slave woman was sacrificed. Before being killed, the female thrall was subjected to a series of rituals with her deceased master, including being forced to have sexual intercourse with various men.

The aim was to ensure the slave received fresh sperm in the underworld to be able to breed new slaves in the hereafter. How consensual the sacrifice was is questionable, for Ibn Fadlan described how the Vikings began beating on their shields to drown out the girl's screams, "so that the other slave girls [would not be frightened] and try to avoid dying with their masters". As the shields reverberated, the woman was held by her hands and feet, after which, "The old woman called the Angel of Death came and put a cord round her neck... She gave the ends to two of the men, so they could pull on them. Then she herself approached the girl holding in her hand a dagger with a broad blade and [plunged it again and again between the girl's ribs] while the two men strangled her with the cord until she was dead." As brutal as the execution sounds, Vikings



▶ **THE BOOK OF SETTLEMENTS:** The Icelandic sagas are among the most important sources knowledge about the life and conditions of slaves. Landnámabók's accounts include, for example, a failed slave revolt in Iceland.



## “ Scholars are certain that Vikings often killed their slaves ”

considered it an honour for a slave to be buried with their master or mistress.

### REBELLION IN JUTLAND

Not all slaves put up with the harsh and undignified treatment. In sagas and historical accounts, we hear repeatedly how slaves both absconded and revolted. In 865, Rimbert, the Archbishop of Hamburg-Bremen, wrote about a group of runaway slaves. According to the bishop, the slaves were a group of Christians who were “carried away to the barbarians”, presumably in Denmark.

The slaves managed to flee across the border to northern Germany. In this particular case, however, their escape proved futile, for the area’s residents “showed no compassion but seized them and bound them with chains. Some of them they sold to pagans, whilst others they enslaved, or sold to other Christians”, according to the bishop’s account. Another group of slaves

who fared equally badly were those who fought back, according to *Landnámabók* (The Book of Settlements) – an account of Iceland’s earliest history. The book tells of how ten slaves from Ireland cunningly ambushed their owner. They persuaded their master and his men to enter a nearby forest to slay a bear that

they said had killed the household’s ox. But when the free men entered the wood, slaves who had been lying in wait killed both the Viking and his aides, before making off with their owner’s belongings and a group of women from the household. The rebellion ended – so the story goes – in bloodshed when another Viking took up the chase and murdered all the escapees.

A safer path to freedom was to show unconditional loyalty to one’s master. According to the Icelandic *Svarfðela Saga* – set in the tenth century – one of the ways a Norse slave might gain his freedom was by being wounded in battle against men



The Inchmarnock stone shows a slave being taken away by Vikings.

who tried to attack his master. The *Eyrbyggja Saga*, set around the turn of the first millennium, also tells of several slaves who were set free after declaring their willingness to commit murder for their master. Another possibility was that the slave could wait for his master’s death, as more releases took place on the owner’s deathbed – a trend that grew more common in the later Viking Age, when Christianity took hold and slavery in Scandinavia slowly died out.

Although archaeologists have found both stone reliefs and necklaces confirming slavery existed, our knowledge of Viking Age thralls remains limited. All we know for sure is that thousands of innocent people – like the man on the Inchmarnock stone – were brutally kidnapped and enslaved by the Vikings. ■

### EYEWITNESS

IBN FADLAN, ARAB DIPLOMAT / 920s

### DEAD SLAVES ENDED UP AS FOOD FOR DOGS



“ If one of them falls ill, [the others pitch a tent for him] in a place distant from them. They leave him some bread and water, but they neither go near him nor speak to him.

[They do not even come to visit him] during all the days of his illness, particularly if he is a poor man or a slave. If he recovers and gets well, he comes back to them; if he dies, they burn him. If he is a slave, they leave him where he is, and the dogs and birds of prey devour him.”









# NORTHERN KINGDOMS

700-1035



In the late Viking Age, Norse lands were ruled by one man: the strongest. The chieftains had become kings and the new Viking rulers were ready to die to retain their power. The struggle to expand their empires – preferably by breaking the other Scandinavian kings and subjugating their lands – was all-consuming.



## 700-1035

**700s** Nordic kings rule over provinces and small communities.

**872** Harald Fairhair becomes the first king of Norway.

**900s** First Danish king, Gorm, reigns from the town of Jelling.

**980** Harald Bluetooth begins to construct ring fortresses in Denmark.

**999** Sweyn Forkbeard wins Norway in the Battle of Svolder.

**1027** Cnut becomes the first King of England and the North.

700 >>> 872 >>> 900 >>> 980 >>> 999 >>> 1027 >>>



The Norwegian magnate Earl Hakon ruled Norway from around 975 to 995, before being assassinated by his servant in a pigsty.

Starting around AD 980, hundreds of workers toiled for years on four impressive structures in Denmark. Circular forts, equipped with ramparts and moats, rose at key locations around the country. They were enormous for the era. The largest, at Aggersborg in North Jutland, measured 240 metres in diameter. As with others of its type, the ring fortress was built using rigorous mathematical principles, with gates placed at the four cardinal points, leading to the four corners of the world. Advanced engineering underpinned the ramparts' construction, and the streets were covered with oak planks.

The forts were commissioned by the Danish king Harald Bluetooth. They were a show of power intended to awe all who saw them. As the first real king of Denmark, Harald needed to ensure that he commanded respect from both his own subjects and rival magnates. The Viking world was witnessing the rise of its first kings and kingdoms, but the new rulers' hold on power was fragile and each royal household was vulnerable. The land of the northern kingdoms, as it formed in the last centuries of the Viking Age, was harsh, bloody and full of power struggles.

#### NEED FOR STRONG LEADERS

One of the great changes of the Viking Age was the creation of empires. Before that time, there was no state or royal power in Scandinavia. The Nordic countries consisted of a hotchpotch of big and small areas, each led by a local magnate or chieftain. The local population usually did not pay much attention to these leaders, at

least not in peacetime, and it usually mattered little whether one or another was in power. All this gradually began to change at the beginning of the Viking Age. The production of goods increased and trade spread. Trading posts and towns grew, and more people than ever before were able to acquire wealth. The increase in trade also meant that Scandinavia had more contact with the outside world, mainly through new naval trade routes.

However, the abundance of goods also invited lawlessness; sea pirates with fast modern sailing ships could rob a merchant of a fortune and attacks on trading posts could destroy the livelihood of an entire

Ring fortresses may have been in use for as little as 10-15 years. Their importance was largely lost once Denmark was unified.

town. The need for a strong leader with the power and resources to protect towns and traders was clear. Such a leader could build and maintain a fleet of ships to protect their vessels and supply a force to keep order in towns. He could also guard against attacks from aggressive neighbours, such as the

increasingly powerful Frankish Empire to the south, and liaise with foreign heads of state to secure favourable agreements on trade and other matters.

On raids and trading voyages to Byzantium and the Arab empires, the Vikings had seen how a strong state could promote trade and travel, and they quickly realised the potential for improving domestic prosperity. Soon, strong and enterprising leaders were overseeing larger and larger territories.

#### RAISED FOR WAR

Some of these leaders called themselves kings. In the early years of the Viking Age,

however, the title was a broadly defined one. None of the Nordic countries was united at this time, and a king could either be the ruler of a particular part of the country – such as Jutland in Denmark or Svealand in Sweden – or might simply borrow the title while the area's real ruler was abroad. Yet some of the kings acted as if they were actual heads of state. King Gudfred (d. 810) seems to have ruled Jutland, Scania and part of Norway, but exchanged diplomats and later went to war with King Charlemagne.

The king was supposed to be elected at a governing assembly known as a *thing*, but if a man had enough silver and land to pay for a retinue, he was usually given power. As both land and silver were generally obtained through conquests, this meant that kings were first and foremost warriors. Indeed, a man's fighting skills and status were crucial to political success.

The warrior mentality was therefore deeply ingrained in the Vikings. In the small societies of the seventh century, where the family lay at the centre of life, the ability to defend oneself and one's loved ones was vital. All free men – which included peasants who formed the backbone of Viking society – had the right to bear arms. And those weapons were often used. To paraphrase the chronicler, Saxo Grammaticus, it was considered more honourable to fight than to be beaten.

Young people were taught early on that war turned boys into men, and they honed their physical prowess and fighting techniques through games and sport. Historians believe that three-year-old boys were encouraged to learn to swing wooden swords in a bid to learn Viking martial arts. As children grew up, if they were lucky, they would be granted a real iron weapon. According to the saga of the Norwegian king Olaf Trygvason, the one-day ruler killed his stepfather with an axe blow to the forehead when he was just nine years old. Although the saga probably exaggerated the tale to make the king seem more heroic, it gives a good picture of how children were expected to take on adult responsibilities from an early age. Swimming was a natural

#### TECHNOLOGY

#### CULTURE

#### ECONOMY

#### DAILY LIFE



### The forge had mythological status

Weaponsmiths and magical weapons were a fixture of Viking Age legends. Thor, the Viking god of war (left), was often depicted as a blacksmith and his hammer, Mjölner, never missed. Once thrown, it unleashed thunder and

lightning, and after the deed was done, it returned to Thor's hand. Several Viking myths are set in a forge, including the story of the mischievous god Loki, who disturbs the blacksmith while he is making Thor's hammer.



# KINGDOMS MADE LINEAGES AND POWER CENTRES



Three areas were of particular note in underpinning the Viking chieftains' growing power and helped establish the Nordic kingdoms. The first Viking rulers quickly expanded from these centres to reign over what we now know as Sweden, Norway and Denmark.

## VESTFOLD

■ The first Norwegian town, Kaupang, is believed to have been located in the region of Vestfold, which lay west of the Oslo fjord. It was from here that Harald Fairhair, the first king of a united Norway, ruled.



## OLD UPSALA

■ According to the chronicler Saxo Grammaticus, Old Uppsala was home to Odin himself. The city was a centre of religion, but kings also held court there. The oldest texts refer to the King of Sweden as the King of Uppsala.



## JELLING

■ This town in southern Jutland gave its name to the Jelling dynasty, Denmark's first royal family. The first Danish king, Gorm the Old, reigned from Jelling. However, he wasn't king throughout Denmark; he probably only ruled over southern Jutland. On the other hand, his son Harald Bluetooth succeeded in spreading both royal power and Christianity.

Haakon the Good (c. 920-961) was Harald Fairhair's youngest son and reigned as Norway's third king.

0 170 km

summer pastime in a North crisscrossed by fjords, rivers and streams, while wrestling was popular all year round. The games that involved brawling translated directly into close combat situations, where Viking warriors often threw down their swords and went hand to hand. In addition, it was also good for learning how to attack at speed and utilise surprise. During the wrestling, Viking trainees also learned to abide by the rules of combat and were scorned if they deliberately injured an opponent.

## KING SHOULD DIE AS A WARRIOR

Above all, young Vikings had to embrace their society's concept of honour. A Viking had to fight and die like a man. The Norse religious belief that every man's lifespan was predetermined, and that the heroic warrior would go to Valhalla, the Vikings' version of Paradise, supported this attitude.

"Nought may send a man to his grave if his time is not come; and if he be doomed to die, nought may save him. To die in flight is

the worst death of all," a farmer in *Sverris saga* admonished his warrior son as they walked towards the longship that would take the young man away into battle. This maxim also applied to rulers:

"Kings are made for honour, not for long life," said Magnus Barfod, king of Norway, who was killed on a raid in Ireland in 1103, according to the saga.

Harald Fairhair of Norway, considered the first true king of the Nordic countries, took power with a sword in his hand. Harald, whose power base was in Viken on the Oslo Fjord, had difficulty subduing the country's other magnates. In western

Norway, he met particularly stiff resistance from a group of local chieftains, one of whom, Thor Haklang, was, according to Harald Fairhair's saga, "a great berserk".

Together with four others, Thor fought Harald in 872 in a fierce battle in Hafersfjord. The chieftains were well prepared. Their fleet consisted of large warships manned by battle-clad warriors. But as they slipped into Hafersfjord, Harald attacked, and soon after Thor Haklang was killed. The other chieftains fled with their shields on their backs as a defence against the stones that Harald's warrior army rained down on them. In >>>>>

# “Kings are made for honour, not for long life”

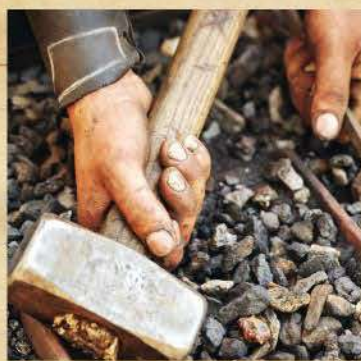


## TECHNOLOGY

## CULTURE

## ECONOMY

## DAILY LIFE



## Sword-making took time and skill

Forging a Viking sword was a straightforward if somewhat time-consuming business. Air from bellows passed through a hearthstone – a protective soapstone or clay shield – to the charcoal embers beyond, while the smith shaped the iron using a

hammer and anvil. Swords were forged by a special process in which layers of strong iron with a high carbon content alternated with layers of flexible iron that had a low carbon content. Finally, the layers were heated and then hammered together.

>>>> this way, Harald Fairhair managed to subdue Norway.

## RING FORTRESSES SECURED POWER

In Denmark, a real kingdom did not emerge until the tenth century. Gorm is generally regarded as the first Danish king, but he probably only ruled over part of Denmark, most likely southern Jutland. Instead, it was his son, Harald Bluetooth, who unified the kingdom.

As a good chieftain's son, Harald had been trained in the warrior craft of his father, and he eagerly participated in the raids that Gorm arranged in his role as chieftain. While he was still young, Harald led a raid to Normandy, where he won great honour by defeating the Franks, who were powerful rivals to the Vikings.

When Gorm died in 958, Harald Bluetooth took the throne and became one of the first to return to Normandy to strengthen the Viking's power base there. Harald also proved to be a shrewd domestic politician. Since the title of king was not automatically inherited but was bestowed via election, Harald knew that he needed to cement his power base. And had he been in

doubt, the way his nephew Gold Harald suddenly returned from abroad and began ingratiating himself in the leading circles would have served as a reminder. Harald felt his position threatened and promptly had the nephew ambushed and killed. It was a strong signal to rival magnates that Harald Bluetooth would not be challenged.

The risks from inside his own borders weren't the only thing troubling Harald Bluetooth: Germany was also a threat. In 974, Emperor Otto II invaded Denmark then doubled down on hostilities by demanding sizeable war reparations. Unfortunately for Harald, the defeat didn't just weaken him in the eyes of foreign powers, it also damaged him domestically. Particularly as he had previously agreed to be baptised into the Christian faith to appease the emperor, a move that most powerful Danes disdained. For the magnates, Harald Bluetooth's religious conversion was further proof that he wanted to usurp a power to which he had no claim. When the Germans attacked,

"If he be doomed to die, nought may save him. To die in flight is the worst death of all."

proving that Harald's change of faith was also politically impotent, the situation deteriorated further. The Danish king needed something to demonstrate his power and strengthen his military might, and so he began building his four ring fortresses. Manned by large garrisons – historians estimate that 500–800 soldiers lived in each fort – the fortifications helped to subdue the recalcitrant petty kings and chieftains, and restore faith in his leadership.

Skeletons unearthed at Trelleborg showed that the fort's garrison had grown up in conditions of relative prosperity without any significant deficiencies in their diet or living conditions. Initially, this led scholars to believe that the ring fortresses were manned by the sons of great men. But new research suggests that the warriors grew up outside Denmark, and researchers now believe that they were Slavic mercenaries who grew up south of the Baltic Sea. This theory is supported by the similarities the ring fortresses bear to contemporary fortifications in that region.

## CONTROL WAS FRAGILE

In addition to the ring fortresses, Harald also erected a large rune stone at his royal seat in Jelling in southern Jutland. On the stone, which was officially a memorial to his father, Gorm, and his mother, Thyra, Harald confirmed his status as "that Harald who won for himself all of Denmark and Norway and made the Danes Christian". Harald wasn't the only Viking monarch to stake their claim to a region in such a manner. Viking kings also erected monuments in places such as Vestfold in Norway, Harald Fairhair's homeland, and the area around Uppsala in Sweden.

Symbols of power, however, were not enough to ensure the Nordic kings' elevated status. The magnates were used to kings being 'first among equals' and had difficulty

## MURDERERS AND MISSIONARIES

*Viking kings founded monarchies and engaged in shifting intrigues and power struggles while spreading or resisting Christianity. Kings had to be constantly on guard against power-hungry rivals.*



**GORM THE OLD**  
936-958

## Father of the monarchy

■ Together with his wife, Thyra, Gorm the Old is regarded as the father of the Danish monarchy. He is likely buried in one of the mounds in Jelling.



**SWEYN FORKBEARD**  
986-1014

## Body sent to Denmark

■ After adding Norway to his empire, Sweyn Forkbeard carried out a series of attacks against England. In 1013, Sweyn defeated the last remnants of English resistance but died two months later. He was laid to rest in York, after which his embalmed corpse was smuggled home to Denmark and buried.



**ERIC THE VICTORIOUS**  
970-995

## Sweden's first king

■ Whether Erik was recognised as monarch throughout Sweden is unknown, but he is the first known king of that realm.



accepting a state power that had the right to claim both land and taxes from them. A large apparatus was therefore needed to enforce the king's power beyond his borders and over domestic rivals and common lawbreakers. A personal guard, known as the *lid*, was responsible for the king's security. There was also the *leding* system that divided the country into districts, each of which was obliged to provide the king with a certain number of ships and crews, enabling him to quickly assemble a fleet of battle-ready Viking ships.

He could use the ships for war, conquest or to enforce order. He also had trusted magnates represent him in meetings with foreign envoys and heads of state. They were also present at trading posts and wherever else a royal presence was needed.

In Norway, Harald Fairhair, who remained unpopular among the heavily taxed nobles, appointed a number of *jarls* (earls) to look after the crown's interests. The *jarls* were the supreme authorities in their appointed areas and had broad powers, including the right to collect taxes. Harald usually chose loyal local chieftains for these posts, often rewarding them with royal estates. According to historians, Harald obtained many of these lands by taking over estates left by noblemen who, frustrated at losing influence to the new monarch, emigrated first to the Scottish islands and later to Iceland.

Money for wages, travel and the expense of maintaining a suitably royal lifestyle came from the king's own land and property. This income was supplemented by customs duties and taxes, as well as any protection money the ruler could squeeze from rival thrones – especially Danegeld in Britain. They also confiscated land and property from defeated opponents.

#### NORTHERN KINGS WERE RIVALS

However, the Northern kings had to worry about more than just their own lords'

loyalty; they also had to guard against each other. Throughout the Viking Age, the Scandinavian kings regularly squabbled, leading to bloody battles and territories changing hands.

Sweyn Forkbeard, son of Harald Bluetooth, inherited his father's flair for power games and political intrigue. In 987, he joined forces with Denmark's nobles to topple his father from the throne. No sooner had Sweyn come to power than he began to look for ways to extend his influence. The opportunity came when Olaf Trygvason became king of Norway in 995.

Olaf was an experienced Viking warrior. He had spent his childhood in Russia, and had subsequently raided and plundered settlements in both the Baltic and the British Isles. When he returned home, he used his vast reserves of silver to build his own entourage to help him take power. Norway's ruler at the time,

Earl Hakon, was soon assassinated, and his sons Erik and Sven Hakonsson fled to Denmark and Sweden respectively.

The Danish King Sweyn Forkbeard sensed an opportunity: he could use the presence of Erik in Denmark as a pretext to seize power in Norway.

Judging by the mood in Norway, the project could succeed. Olaf Trygvason was far from universally popular. His severity was legendary, and he was particularly hard on those Norwegians who did not share his devotion to Christianity. Olaf had been converted during a stay in England, and he was far from merciful when it came to trying to bring others to share his faith. He even went so far as to place a pan of glowing coals on the belly of a pagan

&gt;&gt;&gt;&gt;



**EARL HAKON**  
975-995

#### Murdered in pigsty

■ When Olaf Trygvason returned to Norway to take power, the ruling king, Earl Hakon, hid in a pigsty before being murdered by his servant and friend Tormod Kark.

#### OLAF TRYGGVASON 995-1000

##### Religious advocate

■ The Norwegian king has his own saga, in which he is described as a devoted Christian who wanted to spread his religion. The saga tells how Olaf Trygvason entered a pagan shrine and smashed an image of the god Thor with his axe, "so that the image rolled down from its seat". Outside, Olaf's men killed a peasant chieftain for refusing to convert, after which his followers quickly switched faiths.





# THE VIKING FORT WAS A MATHEMATICAL MARVEL

*The four Viking ring fortresses were built according to advanced geometric and mathematical principles. Trelleborg even has its own measuring stick.*

■ A total of four ring fortresses were built in the Viking Age to consolidate the power of the Danish king and were placed in strategic positions around the country. The best preserved, Trelleborg, is located near Slagelse on the western shore of Zealand Island. Here, postholes and other traces in the ground bear witness to the fact that the Viking forts were built according to strict geometric and engineering principles.

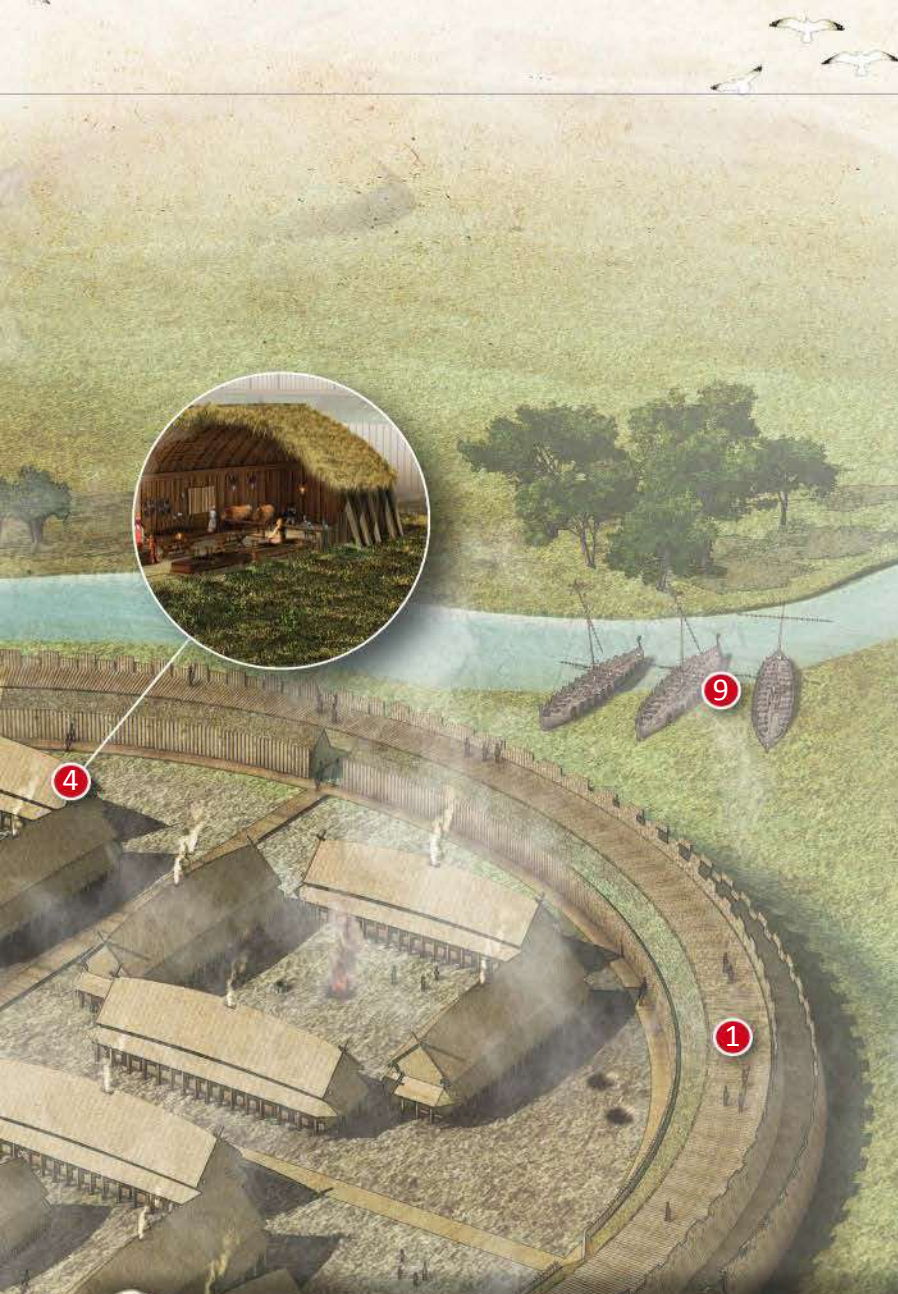
The gates were precisely placed so that they pointed towards the four corners of the world (north, east, south and west). They were linked by two planked roads, which met at a perpendicular junction in the centre of the fort.

The ramparts, moats and houses were also placed symmetrically around the centre, and the accuracy of the construction reveals a fixed scale was used. In the past, archaeologists believed that Viking engineers used a shortened version of the Roman cubit but further research has shown that Trelleborg had its own measure, a "Trelleborg ell", which was 49.3 centimetres.



8





- 1 Excavations show that Trelleborg's ramparts were 180 metres in diameter and as much as five metres high and 17 metres wide. They consisted of earth, wood and stone. Around 25,000 cubic metres of earth were used – enough to fill 1,600 modern lorries.
- 2 Around the rampart ran an outer moat, which was about 17 metres wide and four metres deep.
- 3 The four gates of the ring fortress were six metres wide and formed with large stones and planks. The stone foundations suggest there were carved towers or gatehouses on top of the gates. The bridge across the moat was midway between the two main gates so that attackers were vulnerable to the defenders' stones, spears and arrows for as long as possible.
- 4 The men lived in the longhouses, which were located within the four quadrangles inside the fort's walls. Each house was divided into three rooms. In the middle was the hearth, where food was cooked, while at one end was a small stable for livestock and at the other a store. Each house could house 30-50 warriors.
- 5 The streets bisected the fort and also ran around the inside of the rampart. The solid footpaths consisted of thick oak planks.
- 6 A platform on the rampart gave the Vikings a good defensive position if attacked. The embrasures protected against enemy spears and arrows.
- 7 Outside the rampart was a number of smaller longhouses, which were probably used for storage or as workshops.
- 8 The garrison was buried in a large cemetery. Archaeologists have found 135 graves with the remains of at least 157 people.
- 9 Ship remains found in front of the northern gate show that Viking ships probably docked just outside the ring fortress. The flat-bottomed longships sailed along a stream to reach Trelleborg. The narrow waterway prevented an attacking fleet from sailing in formation.

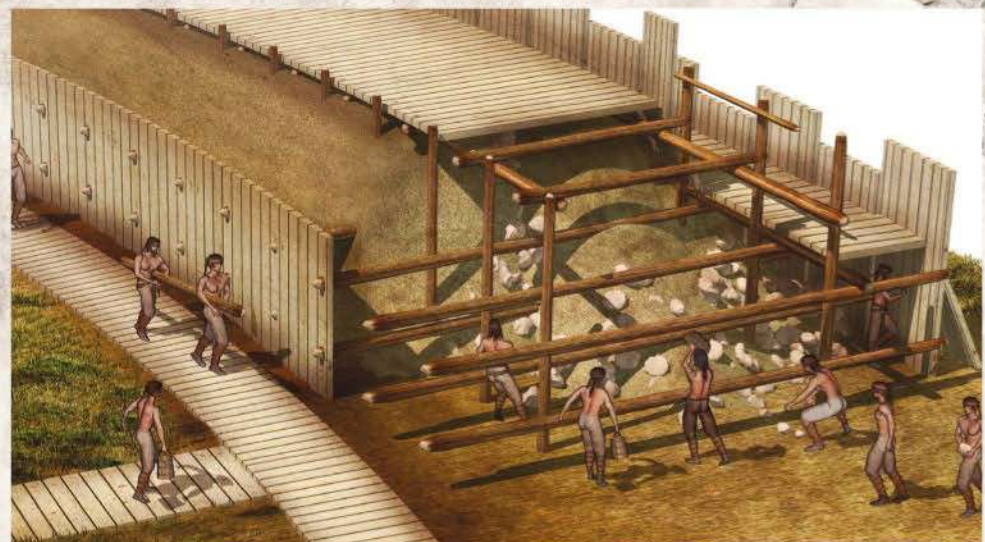


Trelleborg, near Slagelse, as it looks today. Excavation of the ring fortress began in the 1930s.

## The rampart was reinforced with 1,800 ash trees

■ Trelleborg's embankments contain huge amounts of soil. To hold it in place, workers wove together 1,800 young ash trees to form an inner framework. The outside of the rampart was clad with oak planks. Around 8,000 large oak trees were used to construct

the palisades, houses and roads. Most were around 200 years old when felled, with a diameter of 120-130 centimetres and a height of eight to 10 metres. Horizontal beams ran across the rampart, connecting the inner and outer faces.



The inner framework has held the circular shape of the Viking fort in place for over a thousand years.

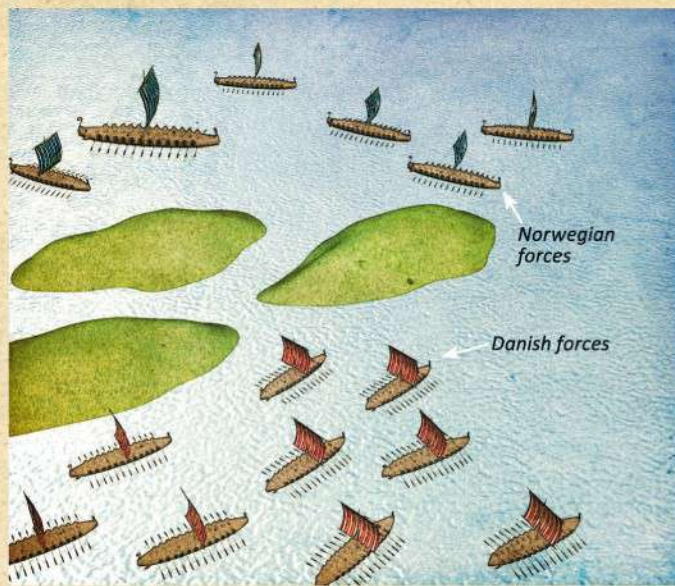


## THE BATTLE OF SVOLDER

## NORWEGIAN ROYAL FLAGSHIP FINALLY FELL

In 999, a Danish-Swedish force under King Sweyn Forkbeard clashed with a Norwegian fleet under King Olaf Trygvason off the island of Svolder. The Danes were outnumbered, but the Norwegian's great 600-man royal flagship, *Ormen Lange*, proved too high to board. The Danes had no choice but to take out the Norwegian ships one by one before they could focus all their men and firepower on the king's ship.

## SWEYN FORKBEARD'S FLEET LIES IN WAIT



■ With 70 ships hidden behind a group of small islands, Sweyn Forkbeard and his allies watch the Norwegian fleet pass. The smaller vessels sail past first, followed by Olaf Trygvason and his nobles. On sighting *Ormen Lange*, the Danes attack.

## OLAF TRYGGVASON ENGAGES



■ Despite being clearly outnumbered, the Norwegian king fights back. He lashes his 11 ships together to create a long fighting platform, with the *Ormen Lange* at one end. The tactic releases the oarsmen to help repel the Danes.

>>> nobleman. Olaf Trygvason's saga states that the king didn't show any mercy even when the man's abdomen burst.

In addition to wanting to exploit Olaf Trygvason's unpopularity among the population, Sweyn Forkbeard also had a personal quarrel with the Norwegian king.

In an attempt to forge an alliance with the powerful Prince Boleslaw of Poland, Sweyn had promised the prince his sister

Thyra in marriage. Thyra, however, refused to marry Boleslaw. Such a rejection was unheard of at the time, but to make matters worse, Thyra sought help from Olaf Trygvason, who promptly made the match impossible by marrying her.

Olaf probably thought that Sweyn Forkbeard would forgive his new brother-in-law, but he was wrong. The Danish king had already devised a plan that would secure him both Sweden and Norway.

The king of the Swedes, Eric the Victorious, had just died, and Sweyn Forkbeard immediately moved to secure a claim to the Swedish crown by marrying the late king's widow. With the relationship between

Denmark's and Sweden's thrones secured for a while, Sweyn turned on Norway.

## KINGS DUELLED

Part of Olaf Trygvason's plan in marrying Thyra was to get his hands on the dowry that Sweyn Forkbeard had already paid to Prince Boleslaw. The Norwegian king, therefore, set off to visit the court of the Polish prince on the southern coast of the Baltic Sea.

Negotiations with Prince Boleslaw dragged on, but Olaf felt secure; he had arranged for his best men to take care of the kingdom while he was away. Finally, he was able to leave Boleslaw's court, after striking an amicable agreement that satisfied his mission. Olaf, however, had underestimated Sweyn Forkbeard.

The Danish king and Erik Hakonsson had long since made a pact that would see Erik installed as regent of Norway in return for paying a tax levy to Denmark.

Now they just needed to get rid of Olaf. To that end, Erik

25,000 m<sup>3</sup> of earth, stone and wood were used to build Trelleborg's ring fortress.



The Danish Jomsvikings mercenaries attack Olaf Trygvason's royal flagship, *Ormen Lange*.

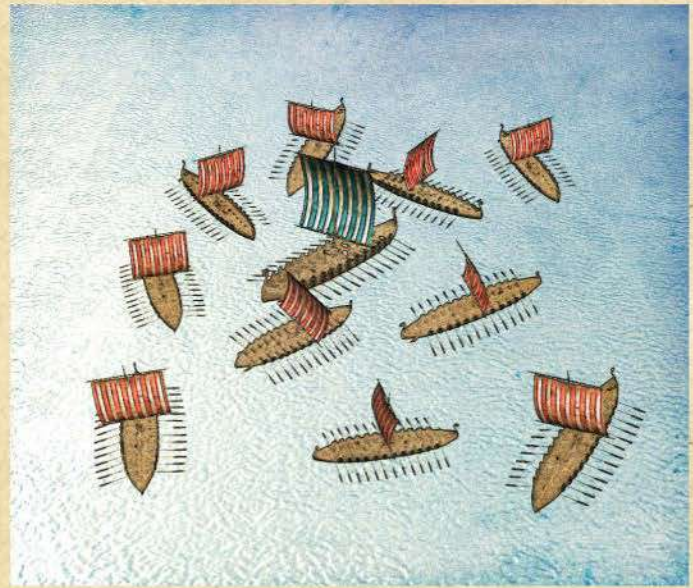


## DANES CHANGE TACTICS



■ The Danes cannot board Ormen Lange because the rail is too high. To exploit their numerical superiority, Earl Haakon devises a new tactic, concentrating his attack on the outermost ship in Olaf Trygvason's line. The Norwegian ships are defeated one by one until only Ormen Lange remains to be taken.

## NORWEGIAN KING IS SURROUNDED AND DEFEATED



■ The king's ship is still too high to board, so Earl Haakon positions his men in a shield wall. Using the shields as cover, the attacking troops rain down spears and arrows on Olaf Trygvason. Danish and Swedish ships surround Ormen Lange. Although Olaf fights bravely, the assaulting force is too strong, and the king finally jumps overboard and disappears into the sea.

recruited the Jomsvikings, an order of elite Danish mercenary warriors from Jomsborg on the southern coast of the Baltic Sea. The Jomsvikings had close ties to Prince Boleslaw, but were essentially loyal to the Danes, with whom they had a long-standing contract for military service. The Jomsvikings had been present at negotiations between Prince Boleslaw and King Olaf and could therefore tell Sweyn Forkbeard exactly when and where Olaf boarded his ship for the voyage home. The Danish king, together with his ally, Erik, took their ships and laid in wait behind a group of small islands. When Olaf's royal ship, *Ormen Lange*, sailed into view, the hidden fleet attacked.

Written accounts place the battle at Svolder, an island that has since disappeared. Some historians believe it was located close to the Baltic coast, while others claim it was nearer the Sound, the strait separating present-day Denmark and

Sweden. Wherever it occurred, the battle was fierce. The Danish-Swedish fleet had the most men, but Olaf's Norwegian ships had higher sides than Sweyn's Danish vessels and were therefore harder to board. Sweyn launched an imprudent direct attack on *Ormen Lange*, but soon had to give way as the fight turned against him. Rather than going for a frontal assault, Erik Hakonsson shifted tactics and attacked the outermost ship in the Norwegian line. Overcoming each one in turn, he worked his way forward until he reached the king's ship.

Erik and his men formed a shield wall and fired arrows and spears at Olaf Trygvason. The king, wounded and bleeding, fought on to the end. Only when the battle was lost did he give in. With arrows whistling around his ears and his shield raised high, he jumped into the water and disappeared beneath the waves.

With Olaf out of the way and Erik on the Norwegian throne, Sweyn could finally call

himself master of the Nordic countries. In the years that followed, Sweyn Forkbeard launched a series of raids against England, which brought him a flood of silver. But the king himself did not enjoy his success for long. Death suddenly claimed him months after conquering England in 1013.

It was his son, Cnut, who, with the help of Erik Hakonsson, finally united the kingdom in 1016. Cnut became a powerful king, and by 1027 could call himself king of England, Denmark, Norway and part of Sweden. He was recognised by the increasingly powerful Catholic Church and took part in the coronation of the Holy Roman Emperor King Conrad II in Rome. The trip was a triumph for the Nordic ruler, who according to court poet Sigvat the Skald, was "dear to the emperor" and "close to Peter". The Viking king had become a medieval monarch. ■

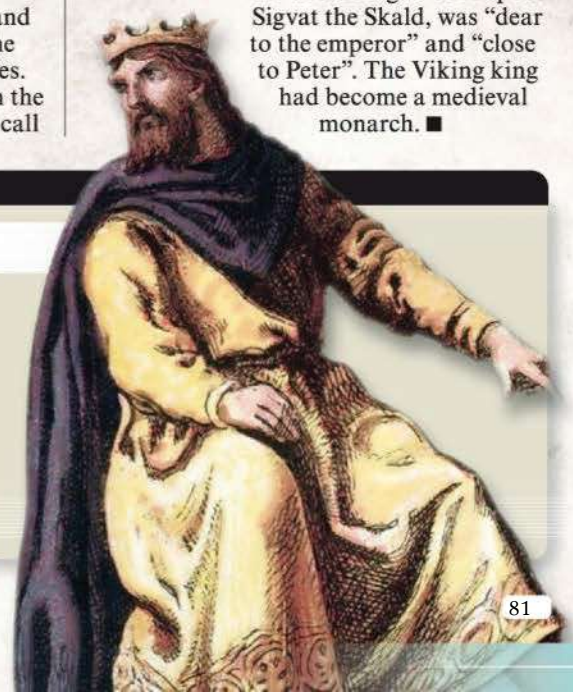
## CNUT THE GREAT 1016-1035

## A MASTERFUL NEGOTIATOR

■ Sweyn Forkbeard's son Cnut was nicknamed "the Great", largely due to his diplomatic skills. His ability to bind chiefs to him was more important than military might when it came to uniting England, Denmark, Norway and parts of Sweden into a single kingdom. At the beginning of his reign, he could be harsh and sometimes cruel to his enemies, but gradually he replaced Viking brute force with diplomacy,

supplementing negotiations with personal gifts. Cnut the Great became the first Norse ruler to enjoy European recognition. Soon, his power base was so firmly established that he no longer needed the four impressive ring fortresses built by his royal predecessors.

*King – Diplomat – Statesman*











# TRADE EMPIRE

700-1050

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In the marketplaces of Scandinavia, merchants could earn a fortune. There were strangers carrying purses filled with Arab silver and glassware from the East, while local merchants sold their coveted fox skins to Southern Europe's elite. Elsewhere, hopeful Vikings ploughed Europe's waterways in search of exotic goods and slaves that could be sold for handsome profits.



## 700-1050

**c.700** Improved shipbuilding techniques enable the Norse to sail to European markets.

**c.750** Swedish Vikings build a trading post on the Volkhov River in Eastern Europe.

**808** According to The Royal Frankish Annals, Gudfred sets up Hedeby as a trading hub.

**c.839** Vikings visit Byzantium for the first time. After 100 years, trade with the metropolis flourishes.

**1050** The Norwegian king Harald Hardrada burns Hedeby to the ground.

700 &gt;&gt;&gt;

750 &gt;&gt;&gt;

808 &gt;&gt;&gt;

839 &gt;&gt;&gt;

1050 &gt;&gt;&gt;

**T**he builders were hard at work in Hedeby. The sounds of scraping shovels, thumping axes and smashing hammers rang out as the new town was raised up on the orders of the Viking king Gudfred. Everything had been meticulously planned and organised to the last detail. The streets were paved with thick planks and laid at right angles to each other so that half of them ran parallel to the Hedeby stream – a small watercourse that ran through the town. The harbour area facing the fjord was carefully demarcated using small landing stages, which later expanded into larger jetties for bigger ships. A strip of bare beach along the water could be used to pull up smaller ships.

Neither the time of the construction of Hedeby – around the year 800 – nor the town's location was accidental. In the preceding decades, trade in northern Europe had grown rapidly. The most lucrative markets were on the south coast of England, along the Rhine and in the area immediately south and east of the Baltic Sea, and King Gudfred deliberately built Hedeby in a central location that connected them all. Through the Schlei inlet, traders could sail out into the Baltic, while the Rivers Treene and Eider provided access to the North Sea.

#### TRADERS IN THE EAST AND WEST

Hedeby quickly developed into a hub for Viking trade, which flourished from the late eighth century until the mid-11th century. During this period, Viking merchants sailed from Greenland in the west to the Caspian

Sea and Baghdad in the east, as silver, skins, hides, iron and timber all flowed through the Vikings' extensive trading network.

#### SHIPBUILDERS PAVED THE WAY

The first trading centres in Scandinavia sprang up during the sixth and seventh centuries. Local traders sailed their goods up rivers and along the Norwegian, Swedish and Danish coasts. From the south, merchants occasionally brought luxury goods, such as glass, gold and precious stones, which could be swapped for Norse skins and amber, but the Scandinavians themselves mostly stayed at home.

During the eighth century, however, Norse trading habits changed. Skilled shipbuilders constructed boats that were both lighter and more stable than before and equipped them with sails. Soon Norse ships

were sailing to the British Isles, down the Frisian coast and up various central and European rivers, including the Rhine. Here they traded at major centres such as Dorchester and Hamwic (now Southampton) on the English south coast, Staraya Ladoga in what is now Russia, and Truso in modern-day Poland.

The traders quickly became skilled navigators, easily able to recall the course and sailing times to key trading centres. The trader Wulfstan (who may have come from Hedeby) said that "he went from Haethum to Truso in seven days and nights, and that the ship was running under sail all the way", according to the *Old English Orosius*, which originated during the reign of Alfred the Great. Alfred ruled over

**Gotland** grew rich from Viking trade. Seven hundred silver hoards containing 145,000 coins have been found.

Wessex in the late ninth century and took a great interest in Viking merchants.

One of the Scandinavian traders who visited Alfred was the Norwegian Ohthere of Hålogaland. He came from near Tromsø and reported that he had sailed in his ship all the way north of Norway to the White Sea to hunt whales and walrus. The Norwegian presented Alfred with walrus tusks as he recounted his long voyage: in Norway, Ohthere also collected the skins of seals, walrus, otters, martens, bears and reindeer. Before he left for England, he had visited both a market in southern Norway and bustling Hedeby in Denmark.

#### TECHNOLOGY

#### CULTURE

#### ECONOMY

#### DAILY LIFE



### Coins were remade as jewellery

The Vikings loved the dirham, the Arabs' silver coins, but the Norsemen did not take the coins' worth at face value. Instead, they determined its worth by weighing the Arab coins to assess the silver content. Often the

Norse melted the coins down and made them into brooches, arm or neck rings, which both men and women wore as a symbol of their status. The jewellery could later be broken up and used as currency if required.

#### SHIPS LOADED WITH GOODS

In addition to skins and hides, enterprising men like Ohthere imported luxury goods, which were shipped from one end of the Vikings' vast trade network to the other, changing hands several times. Glassware was brought from the Mediterranean, pottery from the Rhine region, and silver, silk and spices from the Middle East.

Everyday items were also available from Viking Age merchants. In the areas around the Rhine, traders brought in grindstones made of basaltic lava, and in England, tin, wool and grain. The Danes were entirely dependent on imported iron from Sweden and Norway. Iron was used in everything from the manufacture of agricultural tools and household utensils to shipbuilding and



Vikings did business with everyone from the Franks to the Arabs, and one of their biggest sources of income was the slave trade.



weapons production. Traders shipped the iron to Denmark in large barges, which the Danes then processed themselves.

#### SLAVE TRADE MADE FORTUNES

Often, however, the most precious cargo in the Viking traders' ships was not iron, food or luxury goods, but people. Slaves were among the Vikings' most important and profitable commodities, and the Norse were renowned for their slave trade. At the slave market in Hedeby, merchants offered men and women for sale on a scale that aroused the fierce anger of the Christian missionaries who began to arrive in the town from the mid-eighth century onwards.

Around the year 900, a shocked German bishop – the future St Rimbart – saw “a

multitude of Christians dragged captive by a chain”. Among the captives was a nun, whose freedom the bishop immediately attempted to buy. Rimbart was forced to give up his horse and all his supplies to restore her “ransomed liberty, and allowed her to go where she pleased”.

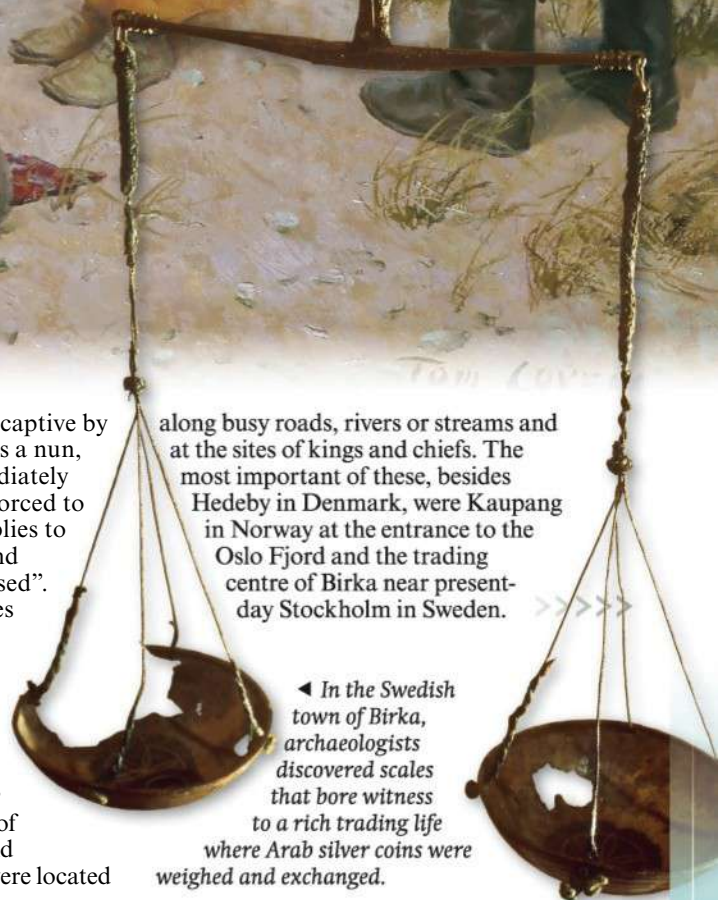
Few were so lucky. Some slaves ended up as far away as Arabia, while many others toiled as servants for Viking farmers, taking on the roughest and most back-breaking work.

#### TRADING VILLAGES SHOT UP

Lively Viking trade led to centres of commerce springing up all around Scandinavia. Typically, markets were located

along busy roads, rivers or streams and at the sites of kings and chiefs. The most important of these, besides Hedeby in Denmark, were Kaupang in Norway at the entrance to the Oslo Fjord and the trading centre of Birka near present-day Stockholm in Sweden. >>>

◀ In the Swedish town of Birka, archaeologists discovered scales that bore witness to a rich trading life where Arab silver coins were weighed and exchanged.





## EYEWITNESS

Ibrahim ibn Yaqub / Hedeby, c950

## A CATALAN MASON IN VIKING HEDEBY

“ [Hedeby] is a very large city, on the coast of the ocean ... The inhabitants mostly eat fish, which are plentiful there ... They gather together for a religious festival to honour the gods, at which they eat and drink ... There is no uglier song than the groans that come out of their throats. It is like the baying of hounds, only worse. ”

>>>> Birka was located near the fertile valleys around Lake Mälaren and housed about one thousand permanent residents.

Archaeological finds have shown that the town was populated by a large number of craftsmen. Metal workers, woodcarvers, leather workers, bronzeworkers and bone sculptors all came to sell their wares to local and visiting merchants alike. During the trading season, people came in their droves from near and far to Birka to trade, but commerce flourished all year round. Excavations of storage sites reveal that hunters from the north gathered in the town to store their wares until the trading ships next called in.

In Kaupang, trade was more seasonal. For much of the year, it was a quiet coastal town populated by farmers and fishermen, but during the trading season, the small town on the Oslo Fjord buzzed with life. Between the wooden houses, local traders and farmers set up their stalls, selling goods to mead-drinking merchants and curious sailors.

In accordance with King Gudfred's wishes, Danish Hedeby became the largest trading town in the North. Archaeologists have found more than 340,000 artefacts in the town, which together tell of a bustling trading hub full of working craftsmen who made everything from amber jewellery to leather goods and small bone combs. From the mid-ninth century, the town's permanent residents – up to 2,000 in number – felt secure behind a wall up to 11 metres high, while wooden stakes were driven into the seabed to form 'pile barriers' that protected the harbour from enemy ships. To attract friendlier merchant vessels, Hedeby's inhabitants built large jetties, the largest of which were probably equipped with warehouses.

## MERCHANT VESSELS HELD 35 TONNES

The Viking Age's brisk trade was helped by a new type of ship developed by Scandinavian shipbuilders during the tenth century. The vessel, dubbed *knarr* by the Vikings, differed significantly from their previous ships. The original narrow and fast longships were designed for war and plunder, and even the ships that sailed out with trade goods carried a large warrior

crew. The *knarr*, on the other hand, carried only a small crew to navigate and load and unload the ship, leaving it with an enormous cargo capacity. The 16-metre-long *Skuldelev I*, a *knarr* found at the entrance to Roskilde Fjord in Denmark, could hold 24 tonnes, and other ships were even bigger. Scholars know that Vikings sailed goods around in 30-metre-long vessels with a carrying capacity of 35 tonnes.

Despite its spacious capacity, the *knarr* was also extremely seaworthy. Its sturdy, high-sided hull and flat bottom ensured the ship remained stable even during the storms that occasionally ravaged the Baltic Sea and North Atlantic.

Experiments with reconstructed ships have shown that a *knarr* like *Skuldelev I* could attain an average speed of around five knots (around 9.25 km/h), while the flat bottom, also found on longships, enabled the traders to sail close to the coast and from there up rivers and streams to their destination. *Skuldelev I* for example, has a draught of just 1.2 metres. The merchant vessels could not reach the shore though, so sailors usually brought small boats to transport goods ashore.

*Knarr* and similar sea-going vessels brought skins of pine marten, otter, fox, hare, squirrel, bear, reindeer and seal, as well as feathers and down from northern Scandinavian birds. The ocean-going trading vessels also sailed to newly discovered Iceland and Greenland, where the Vikings traded for walrus ivory, furs, narwhal tusks and perhaps the occasional polar bear skin.

## SILVER LURED TRADERS EAST

The 16-metre-long *Skuldelev I*, a *knarr* discovered at the entrance to Roskilde Fjord in Denmark, could hold 24 tonnes.

Nordic furs were much sought after in European markets, as animals in the coldest regions provided the best fur to keep warm. But it wasn't just Central

and Southern Europeans who were keen on Viking furs; there was also massive demand for Nordic furs from the Arab merchants the Vikings met at markets in Scandinavia or at trading posts along Eastern European rivers. Black fox fur in particular was popular with Arab elites, who used the fur for fine cloaks and hats.

The Arabs, on the other hand, offered something that could make any Viking's heart beat faster: silver. The precious metal was the most commonly used currency among traders, but as the Norse had no silver deposits of

*Viking trading ships carried both goods and slaves on their long voyages.*

## GREENLAND

In 982, Erik the Red settled in Greenland. His descendants exported fish, animal skins and narwhal tusks to other Viking lands.





# SEAS AND RIVERS LINKED THE TRADE EMPIRE



Adventurous Vikings travelled thousands of kilometres across the sea and along Europe's rivers in the dogged pursuit of profit and rare luxury goods. They sold their wares in the flourishing cities of the north, which buzzed with Saxon, Frankish, Slavic and Arab voices as foreign merchants came to trade with the Norse each year during the trading season.

## KAUPANG

■ **Heyday:** 700-900  
 ■ **Population:** 800  
 Kaupang was Norway's first trading hub. Archaeologists have unearthed pottery and glassware from England and the Rhineland, a glass bead from Turkey, Arab coins – and a few well-preserved Viking toilets.

## HEDEBY

■ **Heyday:** 800-1050  
 ■ **Population:** 2,000  
 Hedeby's market was renowned from France to Arabia. Ships docked at 60-metre-long jetties, and the town teemed with blacksmiths, leatherworkers, glass makers, potters, jewellers and more.

## BIRKA

■ **Heyday:** 800-970  
 ■ **Population:** 1,000  
 On the small island of Björkö in Mälaren, archaeologists found silk from China, Byzantine silk and pearls from France. Björkö's trade flourished, and foreign traders also lived and were buried there.

## ICELAND

The Norse colonised uninhabited Iceland in large numbers around 850, and its residents began trading in rope, narwhal tusk and wadmal, a hard-wearing woollen fabric.

## ENGLAND

The Vikings' imported cloth, gold and spices were exchanged for British goods: grain, wool and tin, which was mixed with copper to make bronze.

KAUPANG

BIRKA

HEDEBY

## FRANCE

The Frankish Empire in the south provided salt, vital for preserving food. The Vikings also traded for wine, pottery and other objects.

## BYZANTIUM

Merchants sailed along the Dnieper and the Black Sea to the capital of the Byzantine Empire to trade for jewellery, cloth and glassware.

## THE RUS'

The Vikings traded briskly in large centres of commerce along the Volga river, buying slaves in large numbers and trading furs with nomads from the east.

## ARABIA

Via the Volga River, the Caspian Sea and camel, Viking merchants reached Baghdad. From there, they brought back spices, silk and silver.

0 1500 km

## VIKING EXPORTS

**SKINS**  
 Wealthy Arabs loved to wear black fox fur from the north.



**IRON**  
 Danish blacksmiths relied on Swedish and Norwegian iron ore exclusively.



**SWORDS**  
 Swords made by Nordic smiths proved popular with the Rus'.



**AMBER**  
 Amber was a sought-after commodity in Southern Europe for centuries.

**SLAVES** ▶  
 The Vikings took so many thralls from among the Slavic peoples that they coined a new term: slaves.







“ Lured by the Arab dirham, coins rich in silver, Swedish Vikings headed south-east ”



## TECHNOLOGY

## CULTURE

## ECONOMY

## DAILY LIFE



## The Vikings borrowed coin motifs

It was not until the end of the Viking Age that a real monetary economy with its own coins emerged in Nordic countries. At that time, the Scandinavian kingdoms began to take shape, and coins became a way of marking each state's

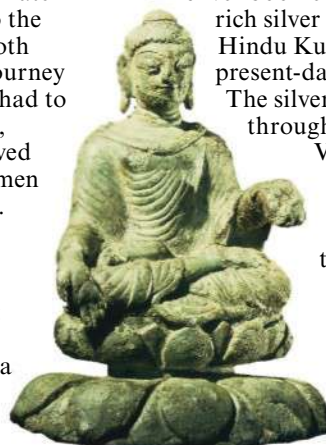
independence. However, this did not stop the Scandinavians from stealing the designs for their coins. Some of their earliest currency featured the face of the Byzantine emperor or the English king Æthelred (left).

*The Vikings ventured thousands of miles from Scandinavia to the wealthy kingdoms of the East.*

swords". Slaves were a key commodity of the Vikings' bustling trade, and the geographer Ibn Hawqal noted in 977 that the Viking slave trade flourished from Spain to Egypt. The latter, however, is probably an exaggeration – certainly, there's no concrete evidence that Vikings reached Egypt.

Viking traders did, however, reach Byzantium – the capital of the surviving eastern half of the Roman Empire. Here, Vikings were lured by beautifully crafted gold jewellery, glassware and ornate brocade fabrics, but the road to the centuries-old metropolis was both arduous and perilous. On the journey down the Dnieper, the Vikings had to pass through nine major rapids, where all cargo had to be removed from boats while the strongest men steered ships through the water.

The most dangerous of the rapids was called *Eyforr* ("ever-violent") by the Vikings. It was here that another threat lurked: the Pechenegs, a semi-nomadic Turkic people from Central Asia who lay in wait to strike and rob travellers on the river. Sentries had to guard against attack, while others pulled or carried the boats forward.



*This Buddha statue found its way to the Swedish town Birka from India in the Viking Age.*

mosques. Lush parks offered breathing spaces around the city, and the banks of the river were lined with marble steps.

The geographer Ibn Rustah found the northerners both brave and loyal, but knew well what the slender, fair-haired men had come for: "They earn their living by trading in sable, grey squirrel and other furs. They sell them for silver coins which they set in belts and wear round their waists," he wrote.

Arab production of the much-coveted silver boomed in the tenth century after rich silver deposits were found in the Hindu Kush mountain range in present-day Afghanistan and Pakistan.

The silver spread with traders throughout the area where the Vikings traded – and much ended up in Viking pockets.

The Viking elite became so wealthy that they adorned their women with jewellery, reported Arab traveller Ibn Fadlan. The women "wear torques of gold and silver, for every man, as soon as he accumulates 10,000 dirhams, has a torque made for his wife," the envoy wrote.

Around the year 1000, however, the Vikings' Arab adventures came to an end.

Abbasid's silver assets gradually dwindled, and the caliphate responded by heavily devaluing its currency. A dirham that was 90 per cent silver in around 1000 contained just five per cent a few decades later.

At the same time, war and unrest made the Caucasus region unsafe for traders, while those Vikings migrating to England and the Rus' slowly cut ties with Scandinavia, with trade declining as a result. The kings of the North compensated by demanding high taxes from the remaining traders, making many move to markets further south.

In 1050, the Norwegian king Harald Hardrada burned Hedeby as part of his attempt to establish himself as the ruler of a unified Viking kingdom. Symbolising the end of an era, the most important trading town in the north went up in flames, and 250 years after its founding, King Gudfred's thriving town had been reduced to ash. ■

>>>> their own, they were constantly on the lookout for the precious metal.

Lured by the Arab dirham, coins rich in silver, Swedish Vikings headed south-east to the Abbasid Caliphate – a vast empire that at its height stretched from North Africa and Andalusia in the west to Afghanistan in the east and from Uzbekistan in the north to Yemen in the south.

The Vikings' first trading expeditions coincided with the Caliphate's golden age. Science and trade flourished alongside economic growth, and the Vikings wanted a share of the wealth. They got it by heading to the marketplaces along the rivers controlled by the Rus', where wealthy traders from the caliphate regularly showed up.

Vikings travelled eastwards in such numbers that the Persian envoy Ibn Khurradadbeh wrote that they "journey from the farthest reaches of the land of the Slavs [Saqlab] to the eastern Mediterranean and there sell beaver and black fox pelts, as well as

### TO BAGHDAD BY CAMEL

While some Vikings braved the Dnieper's rapids to reach Byzantium, the lure of silk and Arab silver drove others to seek out the wide Volga river. Between the Black Sea and the Caspian Sea, the Vikings reached an area they dubbed Serkland. Historians suggest that the name may refer to the word *serk*, the Vikings' term for silk, which flowed into the region from the east.

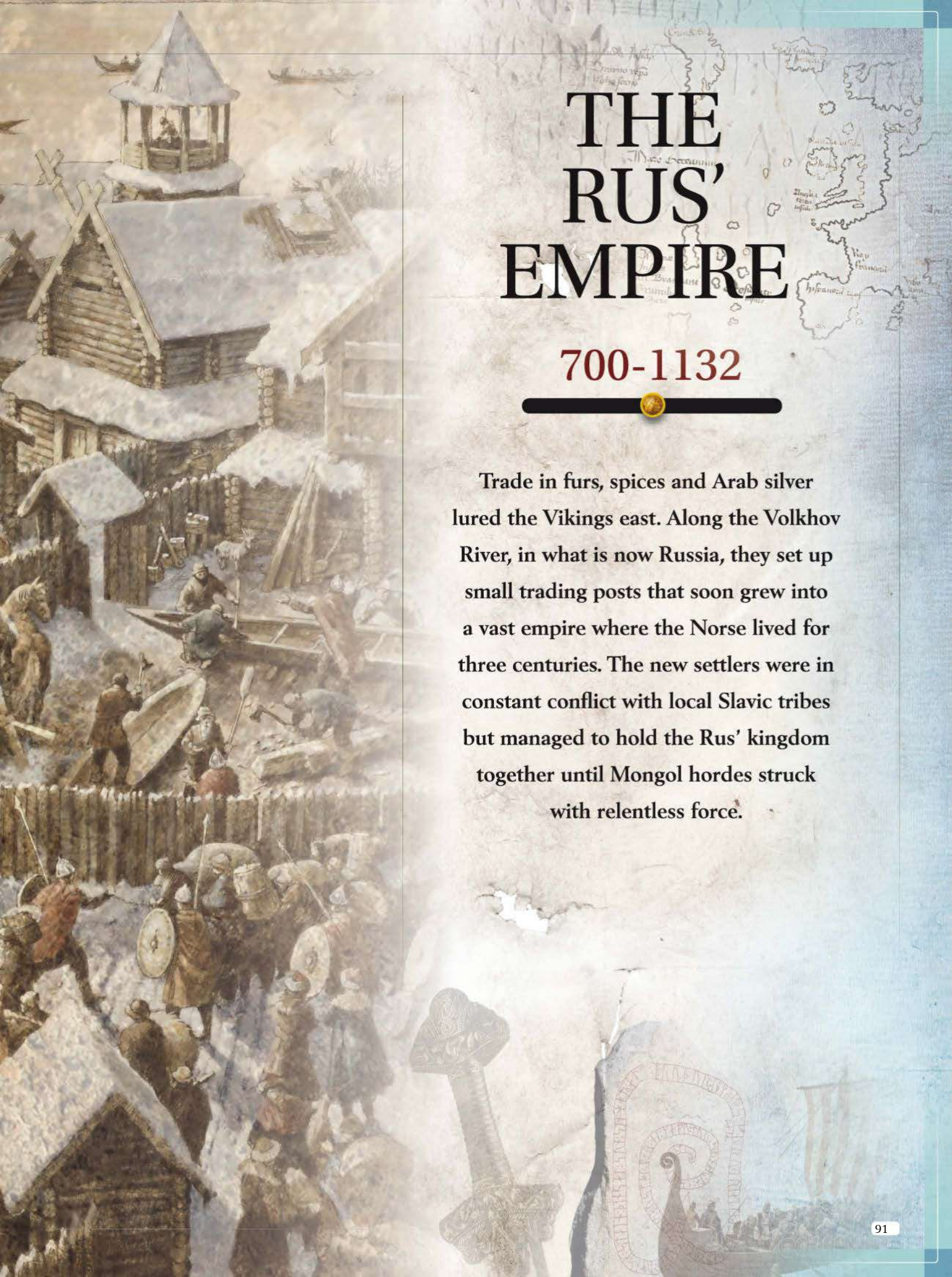
However, the Vikings did not stop in Serkland. A few continued their journey towards Baghdad, the capital of the Abbasid Caliphate. To reach the magnificent city, the merchants had to leave their boats and transport their goods on camels.

If the Vikings thought they saw a mirage when they finally reached the mighty Arab capital, it's perfectly understandable. The city, measuring a full 19 kilometres in diameter and home to hundreds of thousands of people, shone and sparkled with its glittering palaces and magnificent







The background of the page features a detailed illustration of a Viking settlement. On the left, a large wooden building with a snow-covered roof and a small tower with a conical roof is visible. In the foreground, a group of Vikings are gathered around a wooden fence, some holding shields and spears. To the right, a map of the Baltic region is shown, with labels for 'Rus', 'Byzantium', and 'Arabia'. The title 'THE RUS' EMPIRE' is written in large, bold, black letters across the top right, with the dates '700-1132' in red below it.

# THE RUS' EMPIRE

700-1132

Trade in furs, spices and Arab silver lured the Vikings east. Along the Volkhov River, in what is now Russia, they set up small trading posts that soon grew into a vast empire where the Norse lived for three centuries. The new settlers were in constant conflict with local Slavic tribes but managed to hold the Rus' kingdom together until Mongol hordes struck with relentless force.



## 700-1132

<b>c.700</b> Norsemen begin to sail up the Baltic Sea for trade.	<b>c.750 A</b> trading town springs up near Lake Ladoga.	<b>c.850</b> Vikings establish themselves as rulers over some of the area's tribes.	<b>862</b> Rurik makes Ladoga the capital of a new kingdom.	<b>945-972</b> Sviatoslav expands the empire to the east and south.	<b>1132</b> Mstislav I dies as the last ruler of a unified Rus' kingdom.
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700 >>> 750 >>> 850 >>> 862 >>> 945 >>> 1132 >>>

The local traders sought the banks of the Volkhov River as they'd done so many times previously. They brought with them their usual fare: sacks and carts containing stacks of fur along with tubs filled with wax and honey.

Downstream, long, slender ships with regular oars glided swiftly upriver, heading for the trading post. On board were the Norsemen the traders knew so well.

But this Viking visit would not be like the many that had preceded it. Rather than calmly docking to unload their goods, the Vikings now rowed at high speed up the riverbank, where battle-clad men tumbled out of the boats.

With shouts and sharpened axes, the Vikings stormed up the bank, heading for the trading post and the settlements around

it. The peaceful traders had been transformed into violent conquerors.

#### VIKING EMPIRE WAS EUROPE'S LARGEST

Something similar to the events described above may have occurred in the mid-eighth century, when the Vikings conquered a series of trading posts in the area around Lake Ladoga in what is now part of north-eastern Russia. More raids soon followed and before long the Vikings had established their *Gardarike* – the kingdom of the Rus', which historians believe refers to the chain of fortresses the Vikings established at Lake Ladoga and up the Volkhov River.

With the founding of the *Gardarike*, the Norse took the first, tentative steps towards establishing a vast Viking empire, which would expand over the following centuries to stretch across the Russian steppes and

forests, from Karelia in the north to the shores of the Black Sea in the south, then east along the River Don. To the west, the kingdom reached far into present-day Ukraine. The Viking empire that laid the foundations of modern Russia was, at its height, not only Europe's largest but also the continent's richest – an empire built in true Viking style, with equal amounts of trading acumen and raw power.

#### MERCHANTS BECAME RULERS

By the early eighth century, Swedish Vikings had already crossed the Baltic Sea to trade. In search of wealth and trading opportunities, the Vikings sailed into the Gulf of Finland, east along the Neva River to the great Lake Ladoga and from there south along the Volkhov.

With the arrival of the Norse in around 750, the small settlement of Ladoga on the Volkhov grew into a bustling trading town populated by Slavs, Finns and the incoming Scandinavians. Goods from east and west along with a multitude of Arab silver coins flowed through the town, and soon rumours of a 'silver gateway' to the treasures of the East were rife in the North. More Vikings arrived to share in the riches: merchants and craftsmen, who were followed in turn by farmers who had heard tales of vast expanses of uncultivated land. Swedes in particular headed east, as the route was short and easy

According to legend, Slavic tribes invited the Viking chieftain Rurik to rule over them all in order to end internal feuds and battles.





for them, but Vikings from Denmark and Norway also took part in trading expeditions and emigrations. Before long, the whole area was teeming with Norse, who traded weapons, honey, furs, wax and slaves with the local tribes. Some continued south and east on long trading expeditions, returning with cargoes full of Eastern treasures.

But at some point in the ninth century, the Vikings in the Ladoga region must have decided that trading and living as one of the many peoples in the area was no longer enough. Perhaps they realised that the road to silver and prosperity might soon be blocked by rival and hostile tribes. In any case, the Norse decided to subjugate the region's other inhabitants by force, and the conquest was completed by 859. In that year, a number of other peoples in the Ladoga region paid tribute to the Norsemen, according to the *Nestor Chronicle* – an account written down in Kyiv in the early twelfth century and the most important source of Russia's earliest history.

#### RURIK FOUNDED RUSSIA

Originally, Norse rule lasted only a few years before the local Slavic peoples rebelled against their new rulers.

"860-862: The tributaries of Varangians [Vikings] drove them back beyond the sea," the *Chronicle* stated. But the warring Slavic tribes quickly discovered they lacked a unifying force: "There was no law among them, but tribe rose against tribe. Discord thus ensued among them, and they began to war one against another."

The Slavs decided to send for a prince to enforce peace. According to the *Nestor Chronicle*, they settled on asking the Rus' – their word for the Vikings, which historians believe may have derived from the word *ruotsi*, the Finnish word for Swede: "Our land is great and rich, but there is no order in it. Come to rule and reign over us," they reportedly said. "They thus selected three brothers, with their kinsfolk, who took with them all the Russes and migrated."

The eldest brother was called Rurik, and he would become the first of many princes

and grand princes to rule over the mighty Viking empire.

The story of the voluntary submission of the Slavic peoples to Rurik's lineage is unlikely to be true. More likely, the Norse managed to exploit internal divisions among the Slavs to establish themselves as masters over the Eastern European peoples – and masters they were.

According to the old chronicles, Rurik first settled in Ladoga, where he built a high wall to keep out rival Norsemen while he developed the town and expanded his territory. The Viking chieftain built a harbour on the river, modelled along

*The Viking Þorsteinn fell in battle in the Rus' kingdom, according to the rune stone his sons carved at home in Sweden.*

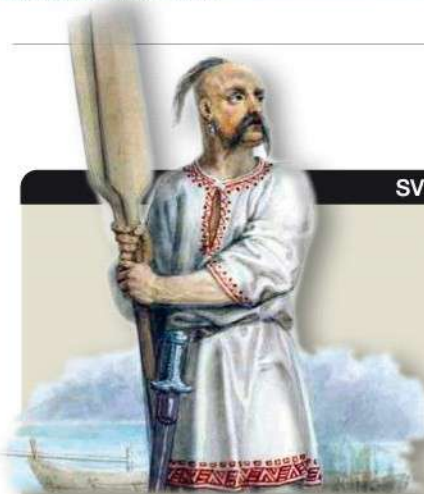
*The nomadic Pechenegs threatened the Rus' from the east.*

#### VIKINGS SHAPED LANGUAGE

The Russian language is full of words borrowed from the North – a testimony to the time when the Vikings ruled.

Russian	Nordic
Oleg	Helge
Olga	Helga
Jakum	Håkon
Igor	Ingvar
Sneg (snow)	Sne
Hákall (shark)	Haj (Old Norse hákall)
Jakur (anchor)	Anker
Krjuk (hook)	Krog
Sholk (silk)	Silke
Tiun (servant)	Tjener
Schneka (longship)	Snekke





SVIATOSLAV I (REIGNED 945-972)

## GREAT CONQUEROR OF THE RUS' EMPIRE

■ Son of the Rus' prince Igor, Sviatoslav was born to rule the Norse kingdom in the east. Growing up in Novgorod, a Scandinavian tutor made sure Sviatoslav did not forget his roots, but as an adult, the prince behaved more like a Slav than a Viking. He worshipped the Slavic gods Perun and Veles and adopted several customs from the area's Slavs and steppe tribes – including sleeping under the open sky with a saddle as

a pillow when on campaign. The Byzantine historian Diaconus described Sviatoslav, saying he “had bushy brows, blue eyes and was snub-nosed; he shaved his beard but wore a long and bushy moustache.. His head was shaven except for a lock of hair on one side as a sign of the nobility of his clan. His neck was thick, his shoulders broad, and his whole stature pretty fine. He seemed gloomy and savage.”

*Conquered vast territories on the Volga, in the Balkans and north of the Black Sea – Crushed East Slavic tribes*

>>>> Scandinavian lines so that traders could call at the town. At the same time, he arranged for a common dwelling to be constructed where visiting merchants could stay overnight when in town.

Later, Rurik moved his capital south, settling at a place called Gorodishche, south of Novgorod. Here the river trading routes between the Baltic, the Islamic East and Christian Byzantium met. Soon other Vikings followed, and a series of archaeological finds, including rune-inscribed jewellery, dragon-headed needles, and arm rings with torso hammers, show how many Norse arrived.

The locals built their houses and farms on the hills a few kilometres north of Gorodishche, and so the town of Novgorod – or Holmgård, as the Vikings named it – was born.

Novgorod was soon to become the Viking capital. Kings and traders from the north came to buy furs, silks and other luxury goods. And from there, the Vikings travelled on to the Bosphorus and mighty

Constantinople, the capital of the Byzantine Empire.

### VIKINGS ATTACKED BYZANTIUM

At the start, the Vikings in the east aspired to be on good terms with the empire, which in the ninth century stretched across what is now Greece and Turkey, as well as parts of Italy. Good relations with Byzantium would

be beneficial for trade, and at the same time would strengthen the status of the Viking elite by demonstrating their good relationship with an ancient and recognised power. For Byzantium, on the other hand, friendship with the Vikings meant new, strong allies and possible recruits for

the army, which was always thirsty for warlike young men. Early contact between the Vikings and the Byzantine emperor is evidenced by the seal of a Byzantine official from the mid-ninth century.

However, the riches of Constantinople proved too tempting: as early as June 860, a

large Viking fleet sailed towards the city. The attack struck Constantinople “like a thunderbolt from heaven”, according to Patriarch Photios, the city’s spiritual leader. The Vikings plundered and murdered their way through Constantinople’s outskirts, spreading terror in the heart of the capital by sailing close to the city walls with weapons raised “as if threatening the city with death by the sword”, Photios wrote with a shudder.

The Vikings were ultimately not strong enough to take the fortified city, but the show of force in June 860 was followed by a similar attack in 907, a clear demonstration that the Norse could do great harm to the Byzantine Empire. To avoid further bloodshed, the emperor concluded a trade agreement with the Vikings and the fledgling Rus’ kingdom, which the Norse were building around Novgorod. The terms were unusually favourable for the Rus’ Vikings, whose merchants were exempted from paying customs duties while also enjoying free accommodation in the city for up to six months at a time. At the same

**4,500**

burial mounds have been found in Gnezdovo. They testify to the custom of burying slave women with their masters.

## VIKING PRINCES CREATED EUROPE’S LARGEST EMPIRE



■ From its first settlements on Lake Ladoga, the Rus’ kingdom grew to encompass ever-larger areas. Rivers formed the empire’s trade routes, and along their banks lay the cities. **Ladoga** was the Vikings’ first major city, while **Novgorod** would later become Prince Rurik’s capital. In the tenth century, **Kyiv** replaced Novgorod at the heart of the empire and grew to become the second largest city in Europe, second only to Constantinople. **Gnezdovo** was conveniently located for trade between Novgorod and Kyiv, while **Yaroslavl** ensured control of the eastern part of the empire.

■ Rus’ empire c 800-1000  
■ Rus’ empire in the 1100s





## “The Vikings plundered and murdered their way through Constantinople’s outskirts, spreading terror”

time, Constantinople’s laws were adapted to resemble Nordic customs. One such provision allowed the killing of thieves caught in the act.

The brokered agreements with the Byzantine Empire ensured peace and prosperity for the Rus’ kingdom, which was now ruled by Rurik’s descendants. They forcibly extended the Viking empire’s borders even further south, to include Kyiv – or Kōnugård, as the Norse called it – from where it was possible to sail by river to the Black Sea and on to Constantinople.

Rus’ merchants travelled great distances from Scandinavia, but largely retained their Nordic culture. The Arab diplomat Ibn Fadlan met the Vikings along the Volga River around 920, and he told how Viking merchants prayed to wooden symbols of their gods, offering up food in return for a good deal.

### GREEK FIRE STOPPED THE VIKINGS

After a peaceful interlude during which trade flourished, the Rus’ Vikings launched another attack on Constantinople in the summer of 941. The sight of fearsome warships and accounts of burnt churches and priests having iron nails driven through their heads gave the emperor “sleepless nights”, according to a contemporary account by Liutprand of Cremona. Soon, however, the Vikings’ bite was proven to be less than their bark. The Norse warriors were no match for the Byzantine

Empire’s two main defences: the thick city walls of Constantinople and Greek fire – a napalm-like substance that Byzantine sailors could spray from a kind of flamethrower, burning and sticking to anything it hit.

The Viking defeat coincided with a long-running development in the Rus’ kingdom. Through political alliances and intermarriage, the Norse and Slavic elites mixed more and more, and under Igor – Rurik’s son and the man behind the attack on Byzantium in 941 – the amalgamation had >>>>

*This Norse decoration from a cloak found in a tomb at Gnezdovo provides evidence of the Vikings’ presence in the city.*



◀ The history of the Rus’ kingdom is told in the Radziwiłł Chronicle – a manuscript from the 13th century. The chronicle is preserved in a copy dating from the 15th century.





progressed so far that Rus' had become the collective term for the kingdom's combined upper class of Slavs and Vikings.

This divergence from their Viking heritage continued after Igor's death, when his widow Olga took over. The female regent took a decisive step towards better relations with Byzantium when, after a short time in power, she allowed herself to be baptised in a solemn ceremony in Constantinople, with the emperor serving as her godfather. At the same time, she took Empress Helena's name as her new Christian name. Afterwards, the

Rus' empress made it clear that she wanted a Christian burial after her death rather than a pagan one.

Sviatoslav, Helena's son and successor, built on this good relationship with Byzantium by supplying hundreds of warriors to the imperial army – although he himself refused to convert to Christianity, arguing that, "My followers will laugh at that."

During his reign, which lasted more than 25 years, Sviatoslav eagerly embarked on campaigns of conquest that greatly expanded the Rus' empire. Under the

prince's rule, the Rus' occupied large areas in the Volga River valley, the Balkans and the steppes north of the Black Sea.

#### SWEDISH CHIEF CAME TO THE RESCUE

Meanwhile, it became increasingly clear that the Rus' empire had evolved into something quite distinct from the fledgling Viking state established by its original Norse progenitors. The capital was now Kyiv, far from Scandinavia, and Prince Sviatoslav himself dressed and behaved like a Slav and worshipped Slavic gods.

After the Rus' empire's expansion under Sviatoslav, however, a crisis arose that clearly proved that Rurik's princely line – to which Sviatoslav also belonged – still relied on the old ties to Scandinavia, despite the growing Slavic and Byzantine influences.

When Sviatoslav died and his son and chosen heir, Vladimir, was challenged by one of his brothers, Vladimir immediately looked to Sweden for help. In 980, he





returned with a large Viking army, which quickly installed him as the undisputed ruler of the Rus' kingdom. From that point on, Vladimir's Norse links remained strong. The Rus' prince married a Norse chieftain's daughter, and the sons who came from the marriage followed their father's example. One even married a Swedish princess. The custom of marriage between the princely family of the East and the Nordic royal houses continued well into the 12th century.

While Vladimir nurtured his Nordic roots, however, he also made sure to improve relations with Byzantium. To accommodate the emperor in Constantinople, the new ruler of the Rus' empire, now known as Vladimir the Great, converted to Greek Orthodox Christianity in 988. Subsequently, the citizens of Kyiv were baptised in the River Dnieper in a mass ceremony, and Vladimir took a second wife: the emperor's sister. The close ties with Byzantium further boosted trade within the Rus's borders, and Kyiv grew alongside this increased prosperity. By the turn of the

millennium, according to German bishop Thietmar of Merseburg, the city contained as many as eight marketplaces and an impressive 400 churches.

#### VIKING ARMY BEAT BACK NOMADS

Links with their ancestral north were to benefit the Rus' kingdom again as late as 1036, when the Pechenegs – a nomadic tribe from the steppes south of Kyiv – launched a major attack. The Rus' prince Yaroslav, whose wife was sister of the Swedish king, quickly sent for a Viking army that effectively repelled the Pechenegs.

We do not know who these mercenaries were, but in the area around Lake Malar in Sweden, a total of 26 rune stones were erected to men who went east with their chieftain Ingvar the Far-Travelled, who, according to the Icelandic sagas, went to Yaroslav's court in 1036.

Under Grand Prince Yaroslav, the Rus'

*The Rus' brutal funeral ceremonies were met with disgust by their Arab guests. One described how all prominent men had sexual intercourse with a female slave before she was sacrificed on her dead master's burial vessel.*

#### EYEWITNESS

*Ibn Fadlan / Arab diplomat in the 920s*

#### VISIT TO THE RUS'



“One of the customs of the king of the Rus' is to have 400 men in his palace, who are the bravest of his companions, men upon whom he can count. Each of them has a slave girl who serves him, washes his head and prepares everything that he eats or drinks, and then there is another slave girl with whom he sleeps. These 400 men sit below the king's throne, which is immense and encrusted with the finest gems. Forty slave girls destined for his bed sit by him on the throne. Sometimes he has sex with one of them in front of the companions ... without coming down from his throne. When he wants to perform his natural functions, he does so in a basin.”

Empire reached its peak as the largest and most prosperous in Europe. After Yaroslav's death in 1054, however, things went downhill fast. As Yaroslav's sons and grandsons squabbled over power, a new and powerful nomadic tribe, the Cumans, began to supplant the Norsemen.

In 1132, the last notable Grand Prince of Kyiv, Mstislav, died. The city then lost its pre-eminence and the empire split into smaller principalities. The Mongols, who ravaged the old Viking kingdom in the 13th century, were the next to strike.

It would be centuries before Russia was free of Mongol rule, and by then, most traces of the Vikings had long been buried deep beneath the Russian steppes. ■



*Vladimir the Great, first Grand Prince of Kyiv, is still hailed as the man who brought Christianity to Russia.*









# ARRIVAL OF THE WHITE CHRIST

710-1100

In 960, Harald Bluetooth erected a rune stone at Jelling in Denmark. On it, the king proclaimed that he had Christianised the Danes. Denmark thus became the first Viking kingdom to embrace the new religion from the South. But although Christian missionaries could apparently perform miracles, that was not the reason behind the conversion. Powerful Viking kings used what they called the White Christ to vanquish their enemies and forge trading alliances. Alongside the new religion, however, pagan customs lived on – including the worship of a dried horse's phallus.



## 710-1100

**710** The first missionary, Willibrord, arrives in the North.

**848** Apostle of the North, Ansgar, builds a church in Hedeby.



**935** King Haakon Adalsteinfostre brings Christianity from England to Norway.

**960** King Harald 'Bluetooth' is baptised.



**1024** Paganism is banned in Norway and Iceland.

710 &gt;&gt;&gt;

848 &gt;&gt;&gt;

935 &gt;&gt;&gt;

960 &gt;&gt;&gt;

1024 &gt;&gt;&gt;

One day in the mid-ninth century, the people of Hedeby were greeted by an unfamiliar noise. From the Viking town's church came the sound of a bell calling people to worship. In 848, Hedeby was the first place in Denmark to have its own church, and it was there that the missionary Ansgar preached to the town's inhabitants and visiting traders. The Christian foreigners rejoiced. The sound reminded them that even in the pagan North there were Christians like themselves. For most Vikings, however, who had not yet embraced Christianity, the tolling of the bell was disturbing. At least, it was according to the German monk and future archbishop Rimbert, who accompanied Ansgar on his travels in the North. He wrote that the "pagans regarded [the use of bells] as unlawful".

However, the bells were only the beginning. Over the next two centuries, the Norse Vikings slowly converted from

heathen pagans to devout Christians, encouraged by business interests and the prospect of becoming allies with Europe's most powerful rulers.

In the ninth century, the sound of the church bell may have been new to most northerners, but the White Christ and other foreign religions were far from unknown to well-travelled Vikings.

#### ASGARD INSPIRED BY HEAVEN

Scandinavian paganism was already a hybrid religion, in the sense that the Norse had drawn inspiration from the different faiths they had encountered on their travels. Norse gods and goddesses, for example, strongly resembled figures from the mythological universes of the ancient Greeks and Romans.

When Christianity was adopted by the Roman Empire in the fourth century, and then by most of Europe, concepts from Christianity also found their way to Scandinavia – especially when it came



Postholes mark the great manor at Tissø on Zealand, Denmark, where Vikings sacrificed and paid tribute to their gods during merry feasts.

to the Norse's ideas about life after death, which changed markedly from the sixth century onwards. Previously, the Norse had thought of the afterlife as the dark and gloomy Hel, where Garmr the dog howled ominously whenever a soul approached the kingdom's gate. Through their encounters with Christianity, however, the Vikings got their own version of Heaven: Asgard, the realm of the gods. Asgard was dedicated to brave warriors who died on the battlefield. There they would fight every day, be healed in an instant and gather in the evening at long tables in the hall of Valhalla, where food and mead were in abundance. The Vikings also adopted the Christian concept of Judgement Day, which they called





Ragnarök, the final showdown between good and evil.

The Vikings' journey to the afterlife, on the other hand, had little in common with that of the Christians. While Christians prayed for forgiveness and peacefully surrendered to God, Vikings sent their dead relatives on their way as though they were warriors on a conquest. In 958, the Danish King Gorm the Old was laid to rest in a burial chamber equipped with a horse, riding gear, silver goblets, weapons, carved wooden objects and many other treasures. Other powerful Vikings were buried in ships or accompanied by their servants, as the Arab diplomat Ahmad ibn Fadlan described during his travels along the River Volga in what is now Russia. He told how, before a burial ceremony, a female Viking slave wandered from tent to tent to have sex with various men before she went to her death with her master. The ritual was supposed to ensure that the deceased took life with him in the form of semen.

Even poorer Vikings were given gifts to take to the grave – perhaps just a single knife or other tool. Women were often given household utensils.

#### VIKINGS WORSHIPPED MANY GODS

The Vikings also had a good knowledge of Christianity, because they had encountered what they called the White Christ in most of Europe during their expeditions to trade and raid. Christian traders also called at Hedeby and other Scandinavian trading centres. Some Vikings made sacrifices to

the Christian God to demonstrate goodwill to their trading partners. Others were even baptised or prime-signed – a Christian made the sign of the cross over someone as proof that they would later be baptised.

However, baptisms and prime-signings had little significance for the Vikings, who were used to worshipping multiple gods. Norse beliefs covered a host of gods, giants and other supernatural beings, so adding one more deity to the mix made little difference. For the missionaries who began to appear in the North, therefore, their task was to get the Vikings to worship one God – and only one.

#### BAPTISM PART OF POWER GAME

The earliest missionary we know of in Scandinavia was the Frisian Willibrord. In the eighth century, he tried in vain to convert the Danish King Ongendus, who, in the words of the British monk Alcuin, was "more savage than a wild beast and harder than any stone". The pagan king did nothing worse, however, than to allow Willibrord to travel around the kingdom until he returned unharmed with an entourage of 30 Viking boys, whom he trained in the Christian faith.

King Harald Klak, who lived from 785 to 852, was even more accommodating when the missionary Archbishop Ebbo of Rheims arrived in Denmark in 823. The king understood that the Christian missionary was not only able to appeal to a higher power, but also had

#### EYEWITNESS

*Ibn Fadlan / Arab diplomat, AD 920*

#### PAGAN SACRIFICE



“My Lord has satisfied my needs and it is fitting that I should reward him for it,” [says the Viking]. Then he takes a number of sheep or cows and slaughters them, distributing part of the meat as gifts and carrying off the rest to set before the great idol and the little figures that surround it. Then he hangs the heads of the sheep or cows on the stakes that have been driven into the ground. When night falls, dogs come and eat this, and the man who made the offering says: ‘My Lord is pleased with me and has eaten the gift I brought him.’”

connections with an important earthly lord, Emperor Louis the Pious of the mighty Frankish Empire, with whom Harald Klak was keen to ally himself. The price of such an alliance was that the king had to be baptised. So, in 826, he travelled to the German city of Mainz and received the Christian blessing in a solemn ceremony.

When the king returned to Denmark, he was accompanied by the monk Ansgar, who would later become known as the Apostle of the North. In the years that

*The Vikings placed magnificent treasures in chieftains' graves to ease their way to the kingdom of the dead and equip them for life after death.*



ANSGAR, 801-865

## APOSTLE OF THE NORTH

■ Ansgar was a German Benedictine monk sent to the North in 826 by the Frankish emperor, Louis the Pious, to Christianise the pagans. The monk also served as a diplomatic envoy between the emperor and the Danish king, Harald Klak. When Klak was expelled from his kingdom, Ansgar travelled on to the Swedish trading town of Birka and continued the mission there. Ansgar converted many Swedish Vikings and is called the

founder of the Swedish Church. In 831, the emperor established an archbishopric in Hamburg, where Ansgar was made archbishop. After a Viking raid, the see was merged with Bremen and served as the starting point for the mission to Scandinavia and headquarters of the Nordic churches. For instance, Ansgar, negotiated permission to build the first church in Hedeby in 848. His life was written about by his successor, Rimbert.

*Benedictine monk – Archbishop of Hamburg-Bremen – Made a saint*

followed, Ansgar wandered from town to town in Denmark and then on to Sweden, where the missionary had more difficulty persuading the Vikings to swap their glorious hall of slain warriors, Valhalla, for a shameful death in their beds. Along the way, the diplomatic monk negotiated with rulers for permission to build churches and bring in more missionaries, and in 830 he was allowed to construct a church in Birka. But when he returned 19 years later, the Swedish congregation had all but disappeared.

### TRADE PROMOTED CHRISTIANITY

The work of the new missionaries in the trading centres of Birka, Hedeby and Ribe was good business for the pragmatic merchants of the North. A church attracted Christian traders and boosted turnover, because the building served as a meeting place and protected travellers. The missionaries also benefited from the foreign traders because the Vikings were more likely to be baptised in order to grow their trade networks. Soon, church bells were

ringing merrily over Hedeby, which in 948 also became the seat of a bishopric.

Throughout the tenth century, more and more people were baptised, especially in Denmark and Norway. Many were on their deathbed. This can be seen from a number of rune stones from Uppland in Sweden, erected in memory of men who died “in white clothes”, a reference to the robes worn by the Norse during baptism and for the following week. But many Vikings did not want to give up their old deities. The Norse feared their gods would punish them if they ceased their worship. Harvests

would fail if the fertility god Freyr cast his wrath at them, or raids would end in defeat if the war gods were riled.

### CHIEFTAIN LED SACRIFICES

Unlike the Roman church, the pagans had neither preachers nor permanent houses of worship. They venerated their gods and made sacrifices at home or during lively feasts in the longhouses:

“They have a feast, when they all gather in order to honour the god and in order to eat and drink,” wrote the Arab traveller At-Tartushi after a visit to Hedeby in the

“They sacrificed 99  
humans and 99 horses,  
dogs and cockerels”





tenth century. Chieftains hosted these *blót* feasts at the solstices, equinox and harvest time. The Vikings called the religious feast buildings *hov*. Archaeologists have found postholes and other remains from hofs at Uppåkra in Sweden, Tissø in Denmark, and Mære in Norway, including figurines of goddesses and Valkyries that were part of the rituals.

Snorri Sturluson wrote in the *Saga of Haakon the Good* how the peasants of Trøndelag sprinkled the walls of their hofs with the blood of slaughtered animals, which they then cooked in a cauldron. Before the feast began, they drank to Odin for strength and victory, then to Freyja and Njörðr in the hope of peace and fertility.

According to 12th-century German chroniclers, humans also had to die to please the gods. Adam of Bremen and Thietmar of Merseburg said that Vikings in Lejre in Denmark and Uppsala in Sweden sacrificed humans in ceremonies in which the number nine had a special significance. According to the chronicles, the Vikings gathered for the rituals every nine years. In Lejre, they sacrificed 99 humans and 99 horses, dogs and cockerels. In Uppsala, it was nine of every kind of male creature, which the pagans hung in a sacred grove. The descriptions should probably be taken with a pinch of salt, though, as the writers were reporting from a Christian point of view,

and Adam of Bremen merely heard the story from a man he had met on his travels.

#### BENEFIT TO KINGS

The role of religious leader strengthened the chieftain's status in the community and was a threat to the magnates, who set themselves up as kings in the tenth century. Christianity gave the magnates an opportunity to end the chieftains' special status and, quite possibly, eliminate their rivals altogether. The self-

proclaimed kings also confiscated a considerable part of the chieftains' land, which they sometimes handed over to the Church.

Christianisation had other strategic advantages, too. The new faith deprived powerful neighbours to the south of an obvious pretext for invading the Nordic countries – the Vikings could no longer be described as barbaric pagans who needed to be converted. In turn, Christian Vikings could use the same grounds to conquer and murder pagans in the Lord's name.

#### POPPO'S ORDEAL BY IRON

According to German monk Widukind's chronicle of the Saxons, in the mid-tenth century, the missionary Poppo sought out the Danish King Harald Bluetooth to convert him to Christianity. To prove the power of the new faith, Poppo offered to undergo ordeal by iron. The chronicle says

To honour the god of thunder Thor, many Vikings wore his hammer, *Mjölner*, as an amulet.



that an astonished Harald Bluetooth watched as the missionary held a red-hot piece of iron, carried it some distance, then showed that his hand was completely uninjured. Harald Bluetooth was convinced and got baptised.

In reality, the baptism may have been more of a strategic move to appease the Holy Roman Emperor Otto the Great, who ruled in the south. But it did not have the desired effect. Soon after, Roman soldiers poured over the *Danevirke* – defensive earthworks in what is now Schleswig-Holstein, Germany, which in Viking times were the Danes' protection against the Franks.

The baptism did help Bluetooth defeat powerful Danish magnates, though, and unite Denmark as one kingdom under his rulership. Between 960 and 985, Harald Bluetooth erected the second of the two Jelling Stones – the first was erected by his father, Gorm the Old. On the rune stone, which became known as Denmark's baptism certificate, the ambitious king proclaimed himself "that Harald who won for himself all of Denmark and Norway >>>>>

In his biography of the missionary, Rimbart said that Ansgar was well received by the Swedish King Björn.





## VIKINGS HELD ON TO PAGAN SYMBOLS

■ A tapestry from Skog Church in Sweden depicts Christian kings from the 11th and 12th centuries: Olaf the Holy of Norway, Canute the Holy of Denmark and Eric the Holy

of Sweden. But the design has a double meaning as the figures also represent three pagan gods: Odin, king of the gods, Thor, god of thunder, and Freyr, god of fertility.



The fertility god Freyr can be recognised by the corn he holds in his hand.



The cross resembles the thunder god Thor's hammer, Mjölner.



Like the king of the gods, Odin, King Olaf is missing an eye.

>>>> and made the Danes Christian" – a claim that wasn't quite true, as many Vikings were already Christians when Bluetooth came to power. In setting himself up as a Christian standard-bearer, he even went so far as to move the body of his father from his pagan grave to a Christian tomb in the wooden church that Bluetooth had built near the rune stone.

## FORCIBLY CONVERTED

In Norway, many Vikings had brought Christianity home with them from raids and trading expeditions in the British Isles. The country's first Christian king, Haakon Adalsteinsfostre, who lived from 918 to 959, grew up in England, and when he returned to Norway in 935, he brought priests who began to proselytise in western Norway, which became a Christian stronghold. However, the priests had trouble making an impact in other parts of the country,

**1103**

was the year when the church in Lund became archbishopric for the whole of Scandinavia.

and when the king died, he was laid to rest in pagan fashion. Haakon, nicknamed the Good, had been lenient with his pagan countrymen, letting them keep their sacred sites. But that soon changed. King Olaf Trygvason, who reigned from 995 to 999, was notorious for his crusades against

Norwegians and Icelanders. King Olaf Haraldsson, who took power in 1015, went a step further and banned the worship of any gods save the Christian God.

## BISHOP DEFILED SHRINE

In the 11th century, Sweden also became Christian, despite fierce resistance to the missionaries.

The Church's response was harsh: accounts from Norway and Sweden tell of Christians destroying pagan shrines in order to punish and educate. According to Adam of Bremen, Bishop Adalward, a missionary in Sweden around 1060, planned to destroy a shrine because "if it was torn down, or

preferably burned, the conversion of the whole nation might follow". However, the Swedish King Stenkil talked him out of it, convinced he would be condemned to death by the Swedes, and Christians would fall back into paganism. Adalward went instead to southern Sweden, where he "broke up idols and thereafter won many thousands of pagans to Christianity".

## PAGANISM LIVED ON

For many years, the old and new faiths lived side by side, as exemplified by a stone mould designed by a far-sighted blacksmith that could cast amulets of both crosses and Thor's hammer. Fertility rituals and other pagan traditions continued among the Christian Vikings, too, sometimes in secret or disguised as Christian custom.

In Norway, for example, according to accounts, the inhabitants had long practised a ritual to the fertility god Freyr, which involved a dried horse's phallus, called a *vølse*. A 14th-century edition of the *Saga of St Olaf* tells of a northern Norwegian farmer's wife who hid a horse's phallus preserved with onions and herbs in a chest. Every evening she took the *vølse* out to sing and say incantations over it. The other inhabitants of the house also took part in the ritual, which continued until the Christian king Olaf the Holy appeared one evening in disguise. The king pretended to agree with the idea and dutifully sang along. But when the *vølse* was in his hand, he seized the opportunity and threw it to the family dog. The farmer's wife was furious with the stranger, but when the king threw off his disguise and taught them about Christianity, everyone was converted.

The story of the *vølse* is probably fiction, but if nothing else, it symbolises how old customs persisted even as church bells rang out for worship – not just over Hedeby, but across the whole of Scandinavia. ■

## TECHNOLOGY

## CULTURE

## ECONOMY

## DAILY LIFE



## Pagan hero was symbol of Christ

The heroes of Viking mythology lived on in Christian Viking society. Sigurd Fafnersbane, for example, was murdered by the love of his life, Brunhild, but before his death, Sigurd killed the evil dragon Fafner, and since in

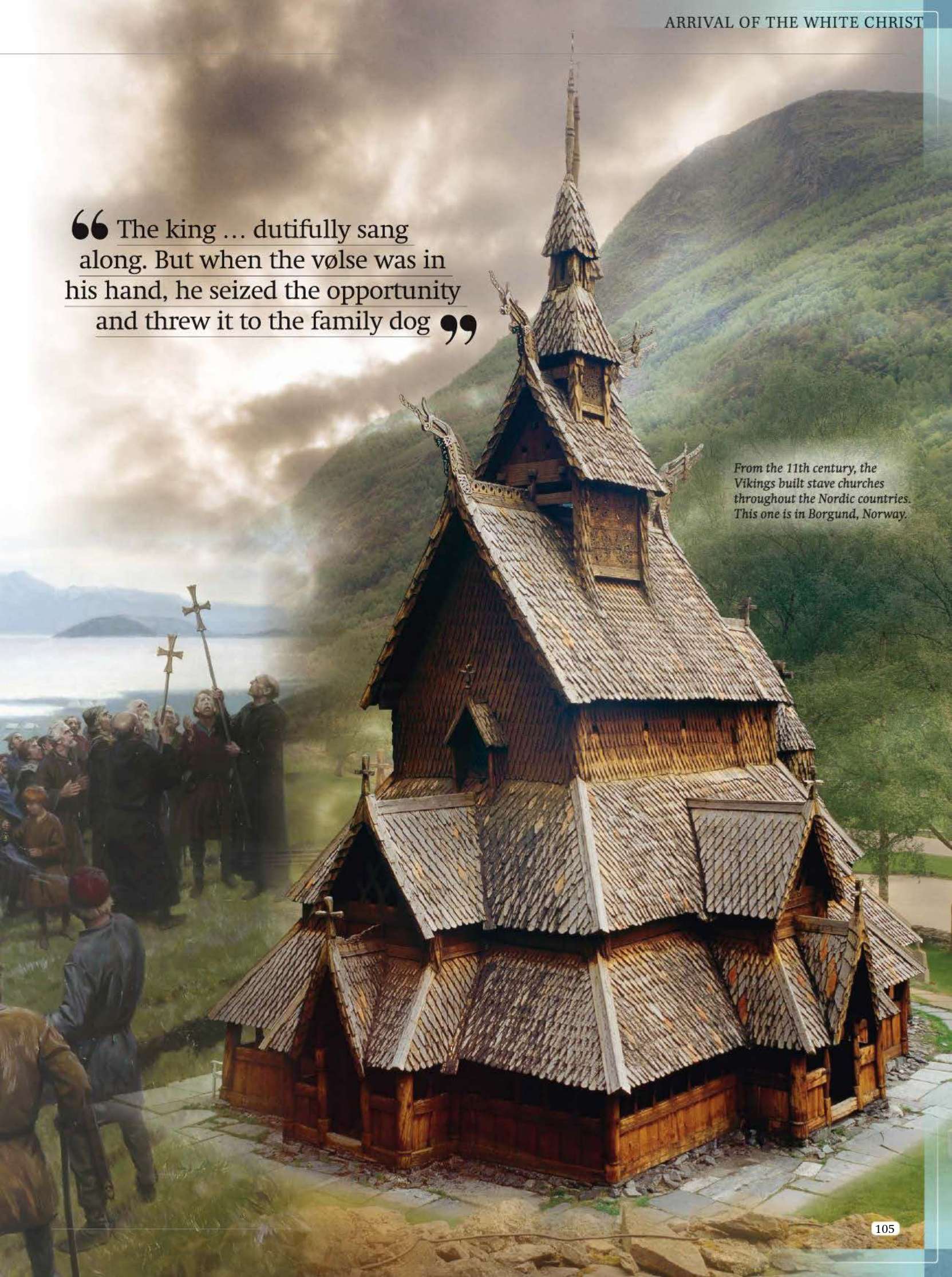
Christian tradition the dragon represents the devil, Sigurd was honoured as a kind of Christ figure. He therefore appears in the wood carvings of the earliest churches and is depicted in stone on the Isle of Man and elsewhere.

Church missionaries ordered the Vikings to fast on Fridays and rest on Sundays.



“The king ... dutifully sang along. But when the vølse was in his hand, he seized the opportunity and threw it to the family dog”

*From the 11th century, the Vikings built stave churches throughout the Nordic countries. This one is in Borgund, Norway.*











# THE LAST VIKING

1015-1066

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Harald Hardrada was described by his contemporaries as “fair-skinned” and “fierce”. And his story is both bloody and brutal. The Norwegian Viking king went to war at the age of 15, pursued honour and wealth in the Rus’ army and later became a bodyguard to the emperor in Byzantium. Historians regard Harald Hardrada as the last true Viking – born with warrior blood during the last few years of the Viking Age.



## 1015-1066



1015

Harald Hardrada, the last real Viking, is born in Norway.

1030

Defeat at the Battle of Stiklestad sends Harald into exile.

1030-33

Harald carves out a career in the Rus' army.

1034 Adventure and plundering opportunities lure Harald to Constantinople.

1046-47

Harald returns home and becomes King of Norway.

1066 Harald dies at the Battle of Stamford Bridge in an attempt to conquer England.

1015 &gt;&gt;

1030 &gt;&gt;

1030 &gt;&gt;

1034 &gt;&gt;&gt;

1046 &gt;&gt;

1066 &gt;&gt;

One day in the 11th century, Halfdan, a Viking, stood in the mighty Hagia Sophia Cathedral in Constantinople. Above him, the dome rose more than 55 metres into the sky. Hagia Sophia was the most important church in the powerful Byzantine Empire and the largest cathedral in the world. It was here that emperors were crowned, and gold and marble shone from every wall and every nave. Images of saints, angels and cherubs adorned the walls and ceilings.

Whether the splendour and beauty overwhelmed Halfdan to a degree that made him wish to be part of the mighty spectacle for ever, or whether he was merely bored during a long church service it is not known. But it is certain that he wrote a

message to posterity where he stood. He carefully chiselled "Halfdan carved these runes" into the marble of the balustrade. The inscription can still be seen in the south gallery of Hagia Sophia. After being lost for 900 years, it reappeared in 1964, when an archaeologist found and translated the ancient runes.

## VIKING AGE EBBED AWAY

Historians believe that Halfdan was one of the Norse who formed the backbone of the Byzantine emperor's elite bodyguards, the Varangian Guard, from the tenth century onwards. In the emperor's service, the Vikings risked their lives for the ruler and mercilessly killed his enemies.

The centuries before Halfdan carved his name on the balustrade of Hagia Sophia had seen prosperity and expansion of which few Scandinavians would have dared to dream, and shortly after the turn of the millennium, the Norse ruled England, much of present-day Russia, south-east Greenland, Iceland and the Faroe Islands. Viking ships were among the finest in shipbuilding craftsmanship, Norse art was admired and imitated far and wide, and the Vikings were known as skilled and fearless warriors in much of the world.

But everything was changing, and while Halfdan was carving his runes in the marble of Hagia Sophia, the Viking Age was coming to an end. The raids on the rivers of western Europe were long over, brought to an end by an increasingly powerful Frankish Empire, and the flow of Arab silver that had once lured hordes of Vikings eastwards was drying up as the Arab Abbasid Caliphate's wealth declined.

In the Vikings' Scandinavian homelands, increasingly powerful kings with diplomatic

connections and trading interests with the rest of Europe prevented adventurous chieftains and magnates from organising raids into the unknown. War and plunder, to the extent that they took place at all, were now the prerogative of kings. Men with a sense of adventure had to seek new paths.

## 15-YEAR-OLD HARALD WENT TO WAR

Few had more wild Viking spirit to offer in the twilight of the Viking Age than Harald Hardrada, who came into the world in 1015 as the son of the chieftain Sigurd Syr. At the age of just 15, Harald fiercely defended his brother, the Norwegian King Olaf (later called the Holy), at the Battle of Stiklestad. Harald's courage in battle inspired a skald to compose a chilling tribute:

"You wiped blood from your greedy sword when battle was over. You fed the ravens with corpses while wolves howled in the mountains. ... Nowhere have I ever heard of a greater soldier than you."

Harald's heroism was in vain, however, because Olaf was killed, and Harald had to flee the battlefield in haste. Helped on his



CULTURE.....

ECONOMY.....

DAILY LIFE.....

## Vikings livened up the streets

The Varangian Guard attracted attention in Constantinople when Vikings in colourful cloaks and bearing battle axes marched through the city. As security forces, the Norsemen were feared when patrolling the streets

to deal with unrest and coup attempts, but that didn't stop the citizens from making fun of them. The guards were notorious for their alcohol consumption and were colloquially known as the emperor's wine sacks.





From around AD 900 and for 200 years onwards, the Vikings in the Varangian Guard followed the emperor of Constantinople everywhere.

way by a peasant's son, who described the young Harald as "fair-skinned, imposing, with thick eyebrows and a quite fierce expression", the 15-year-old warrior travelled east until he reached Sweden. There he was reunited with several of King Olaf's men who had also escaped the battle. Together they sailed to the Rus' and the court of Grand Prince Yaroslav the Wise, who had close ties to the North.

As a warrior in the prince's army, Harald travelled far and wide in the kingdoms to the east, but after a few years, ambition drove him on. He sought the metropolis of Constantinople, where he enlisted in the Varangian Guard. The warlike Harald could not have chosen a better place.

#### VIKINGS WERE MOST LOYAL

The Old Norse word *vár* originally meant "pledge" and referred to the Norse mercenaries who served in the area around Lake Ladoga in present-day Russia from the late eighth century. There, for a fee, they protected local rival tribes against each other. The Vikings' reputation as good

warriors and loyal men soon reached the emperor in Constantinople, and as part of a trade agreement with the Rus' empire in 911, he allowed Scandinavians to join the emperor's service. According to old Byzantine state records, the Varangian Guard was in battle several times during the early tenth century – including in the then-Muslim Emirate of Crete, where the emperor deployed 700 men.

When Harald arrived in Constantinople around 1034, the Varangian Guard formed the backbone of the elite imperial troops, and the Norsemen followed the emperor everywhere on his journeys and campaigns. When the head of state camped for the night, he always had 100 guards pitch their tents in a protective ring around him.

Often the guards were deployed where other soldiers had failed or where special courage and ruthlessness were required, and Harald impressed more than anyone else with his bravery and resourcefulness. Soon he was in command of his own unit, which he led to Asia Minor. There he captured 80 cities, according to *King*



Around 1000, the Viking Halfdan carved his name in the marble of the Hagia Sophia Cathedral in Constantinople, modern-day Istanbul.



## EYEWITNESSES

PRINCESS ANNA KOMNENE OF BYZANTIUM /  
*Vikings in action in Albania, 1081*

# VIKINGS FIGHT AGAINST THE NORMANS



“Meanwhile the axe-bearers ... had advanced a fair distance from the [Byzantine] lines, carried away by their own inexperience and hot temper; they had gone too fast, eager to clash with the Normans who were just as eager.”

[The barbarians] were devoted to war, like the Normans, and in the matter of fighting were by no means their inferiors.”

# “With the entire town engulfed in flames, people begged for their lives”

with his courage and cunning. Snorri Sturluson tells us – possibly not entirely accurately – that one day Harald persuaded a town to surrender by sending in a flock of birds with burning wings. Harald and his men had tied small bundles of pine shavings smeared with wax and sulphur to the birds’ wings and then set them on fire. Flapping, the birds sought their nests under the roofs of the town, and soon one building after another was alight. With the entire town engulfed in flames,

people prayed for their lives. Harald let them out and then sacked the city.

According to Snorri Sturluson, Harald’s plundering and conquest of Sicily continued with one elaborate plan after another. In front of one of the island’s fortified towns, Harald arranged to have his “tent moved away from the main camp”. Every day for a whole week, five or six men would enter the tent, stay there for a while and then come out again with sombre expressions on their faces, all the while being observed by spies sent from the nearby town. In this way, it would seem plausible when a delegation of Vikings knocked on the town gate to tell the inhabitants that Harald had died of illness and had expressed a wish to be buried in

>>>> *Harald’s Saga* – an account written by the Icelandic Snorri Sturluson around 1200. Harald plundered the captured territory for gold and silver, then went on to Sicily, where his forces were deployed against the Arabs who had conquered the island. There, too, Harald made a name for himself





one of the town's churches – for a hefty fee, of course.

The plan was carried out, just as Harald had dictated, and the town's priests unsuspectingly took the bait. Twelve Vikings were allowed to carry a silk-wrapped coffin into town, but in the middle of the gate, the Vikings surprised their Sicilian hosts by wedging the coffin into the entranceway so that the rest of the Viking army could storm in.

### LOYAL WARRIOR

Although Sturluson probably added his own colour to the stories of Harald, there is no doubt that the Norseman impressed the Byzantine ruler. The emperor's faith in Harald was so great that he appointed the Norwegian Viking to escort the craftsmen he sent to Jerusalem to rebuild the Church of the Holy Sepulchre on Calvary. Wherever Harald went, towns surrendered to him, according to Snorri Sturluson.

"The all-triumphant warrior left Greece to conquer Palestine – an easy task for Harald," another storyteller, the skald Stuf, mused. Reportedly, Harald even found time to bathe in the River Jordan, as was the custom for pilgrims.

The stories of Harald's exploits made the Varangian Guard attractive to the Norse,

*The Viking Ragnvald had these runes carved so that everyone would know that he had been an officer in the Varangian Guard.*

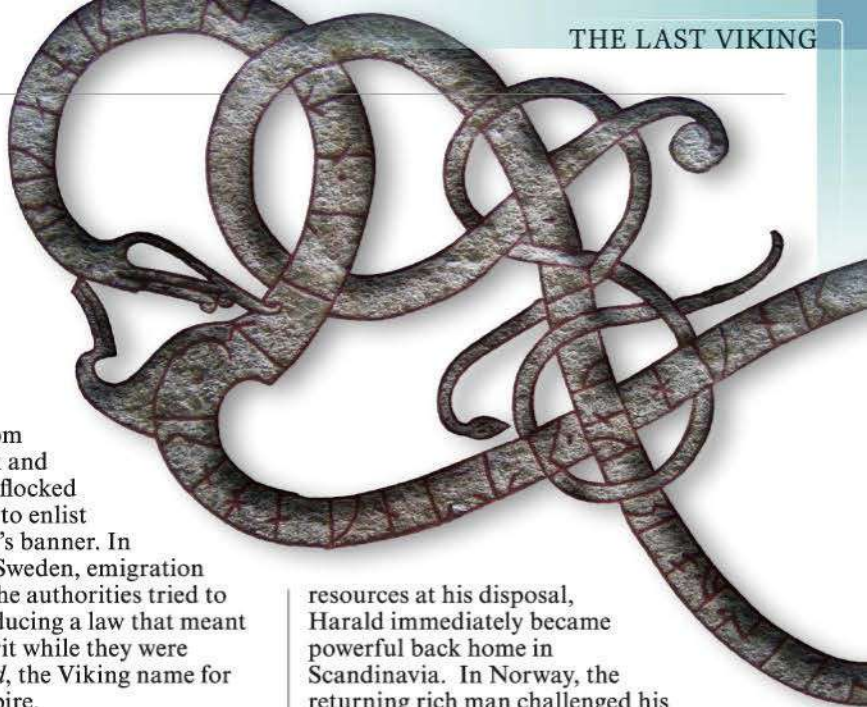
and young men from Norway, Denmark and especially Sweden flocked to Constantinople to enlist under the emperor's banner. In Västergötland, in Sweden, emigration was so great that the authorities tried to intervene by introducing a law that meant no one could inherit while they were staying in *Grikland*, the Viking name for the Byzantine Empire.

Harald, however, went in the other direction. Bursting with confidence, in 1046 he decided to go home to conquer Norway.

During his time in the Varangian Guard, Harald had managed to amass enormous wealth – a collection of riches "so immense that no one in northern Europe had ever seen the like of it in one man's possession before", claimed Snorri Sturluson. With so many

resources at his disposal, Harald immediately became powerful back home in Scandinavia. In Norway, the returning rich man challenged his own nephew Magnus – nicknamed the Good – to a battle for the throne. To this end, Harald teamed up with the Danish magnate Sweyn Estridsson, but when Magnus offered half of Norway's kingship in return for a share of his wealth, Harald changed sides. A year later, Magnus

*During the Battle of Stamford Bridge, England's King Harold killed Harald Hardrada, the last true Viking.*







>>> died, probably from injuries sustained in one of the battles against Sweyn Estridsson. Harald was now the sole ruler of Norway.

However, his new position only made Harald turn his attention to Denmark, where Sweyn Estridsson had seized power. Swearing that he would never let the king of Norway take Denmark, Sweyn defended his country ferociously. Nevertheless, Harald managed to ravage and plunder two of the most important Danish trading towns, Hedeby and Aarhus. Hedeby, near Schleswig, had been one of the busiest trading centres in the Nordic countries for over 200 years, visited by merchants from all over Europe, but after Harald's raid, the town never regained its former glory.

However, Harald's costly warfare made him so unpopular at home in Norway that people in several districts refused to pay taxes. Harald cracked down on the stubborn peasants. "Some of them he ordered to be maimed, others killed, and most of them deprived of all their possessions," Snorri Sturluson wrote of the time when Harald earned his nickname, Hadrada – the Hard Ruler.

#### ENGLAND'S KING WAS WEAK

In 1064, after 15 years of fierce but futile fighting, Harald finally gave up his claim to Denmark. But only to set himself an even greater goal: to conquer England. According to Snorri Sturluson, Harald was persuaded by Tostig Godwinsson, brother of England's reigning king. There was much to suggest that the capture of England would be relatively easy for a man like Harald. For almost 200 years, a lot of the country had been dominated by Vikings, who submitted to the English kings – culminating in Cnut the Great, who actually became King of England in 1016.

But after the heirless Cnut's death in 1035, England's kings were weaker. In 1051, King Edward the Confessor even abolished the heregeld – a tax that had previously funded the English throne's Norse mercenaries. Thus, an important defensive army was sent home to Scandinavia. When Edward died childless in 1066, Earl Harold Godwinson – the country's most powerful man and Tostig's brother – was crowned king. Tostig, however, felt

*The Vikings' long-handled axe became known throughout medieval Europe as the Dane axe.*



When the powerful earl Harold is crowned King of England in 1066, the Norman Duke William is angry, the Bayeux Tapestry shows. He thinks the throne should be his.

that the throne should be his, so he immediately sought support from the helpful Harald Hardrada.

#### HARALD TOOK YORK

What Harald and Tostig did not know, however, was that King Harold was extremely well prepared. Not for an invasion of the Norse, but for an attack from Normandy. Just across the English Channel, the threat came from Norman Duke William, who believed that because of the close ties between England and Normandy, he had a claim to the English crown.

Due to the threat from William, Harold's army and fleet had been on high alert on the English Channel for months when Harald Hardrada and Tostig Godwinsson set sail from the Sognefjord in Norway with 200 longships, heading west.

Among the Norwegian Vikings in Orkney, Harald gathered even more warriors before sailing south to land in northern England. There, the war-loving ruler first burned and sacked a small village before he and Tostig set course for the ancient Viking stronghold of York, now home to northern English jarls. Along the way, Harald secured the backing of Englishmen willing to betray Harold, bringing the invasion army up to 7,500 men in 360 ships.

Just outside York, Harald's men were met by a smaller army led by the Earls of Morcar and Edwin, and at first, it looked as though the English would send the Viking warriors packing. But

when Harald deployed his full force, the Vikings quickly gained the upper hand. The jarls managed to escape, but their army was crushed and many of the soldiers drowned in the nearby river – so many, according to Snorri Sturluson, that the Vikings could walk across without getting their feet wet. York surrendered, and the way was now open for Harald.

#### HARALD CAUGHT BY SURPRISE

However, Harald was heading north at speed. In just five days, the English king and his warriors covered 305 kilometres – a remarkable feat considering that most of the soldiers didn't have horses and had to cover the distance on foot.

On 25th September, the English king, with a fearsome force at least as great as Harald's, surprised the Norwegian Viking and Tostig at Stamford Bridge – a crossing over the River Derwent, 11 kilometres east of York. Harald had been so convinced that the English were nowhere near that he'd split his army in two. Together with Tostig and a small vanguard, Harald was at Stamford Bridge, while the bulk of the Viking fleet – and thus most of Harald's warriors – were several kilometres away.

Exactly what happened that day at Stamford Bridge no one knows – but according to Snorri Sturluson, it was no picnic. Seriously outnumbered, the Vikings immediately surrounded Harald Hardrada, but Harold's men cut them down, one by one, until they finally reached the Norwegian king himself. With an arrow in his throat, Harald fell, mortally wounded.

The Vikings at Stamford Bridge were all but defeated when the rest of Harald's men

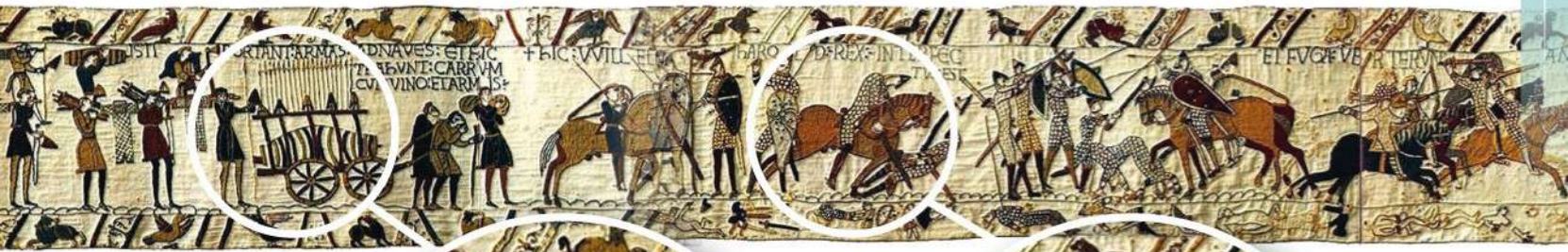
finally arrived on the battlefield. To get there more quickly, many had dropped their weapons, shields and chain mail along the way, so they arrived armed only with fists and fighting spirit. They took full advantage of both – the onslaught was so violent that for a moment the English retreated from the frenzied warriors. But

tired from their rush to the battlefield and without shields and breastplates to protect them, the Vikings could not sustain the attack. When night fell, Harald and Tostig both lay dead on the battlefield, along with some 6,500 other Vikings. Only 1,000 were

*The Normans who invaded England were descendants of Norse Vikings who had settled along France's northern shores centuries before.*

**360** ships made up Harald Hardrada's fleet in the attack on England.





able to escape with their lives.

A few weeks later, on 14th October 1066, the expected attack from Normandy arrived. This time, Harold could not hold out. The king died at the Battle of Hastings in south-east England after eight hours of fighting against William, who could now take England's throne. The conqueror was crowned on Christmas Day 1066 in Westminster Abbey, ushering in a new and much more stable era in England's history. The Viking Age was finally over.

#### **NORMANS REPLACED VIKINGS**

Harald Hardrada is considered by many historians to be the last true Viking, but in Constantinople, other Norse loyal to the emperor continued to serve for some time. Eventually, however, these Viking warriors



William gathers an army and prepares to invade England. The armament also prompts King Harold to assemble a huge force – the one that kills Harald Hardrada.



However, Harold's warriors are no match for William's knights – the English king falls at the Battle of Hastings. William, now known as the Conqueror, takes the throne.

were also replaced by Normans and Anglo-Saxons. The Guard was finally disbanded when the Crusaders conquered Constantinople in 1203 and drove the emperor from power.

But in Hagia Sophia, there are still traces. Reminders of Easter services, when Nordic soldiers with axes at their shoulders stood as a guard of honour behind the

emperor's throne. Of magnificent coronation ceremonies, where the emperor gratefully showered his Scandinavian bodyguards with gold and silver coins. And of a Viking called Halfdan, who one day chiselled his name into the marble balustrade of the south gallery as a permanent reminder of when the Vikings were Europe's foremost warriors. ■











# HUNTING THE VIKINGS

1873-1961

When two farmer's sons plunged their shovels into a mound near a Norwegian farm at Gokstad in 1880, they weren't just about to uncover a chieftain's tomb that had lay hidden for a thousand years. Their dig also triggered an intense search for the Vikings' past. Since then, excavations of ancient towns and burial mounds have given archaeologists knowledge of everything from Viking hygiene to the origins of one king's bodyguards. But despite these discoveries, many questions remain unanswered. Not least the riddle of who was buried at Gokstad Mound, a mystery that has never been solved.



## 1873-1961

**1873** The Viking Age is defined as a period for the first time.

**1880** Two farmhands uncover the Gokstad ship in a mound.



**1949** A US chemist invents the carbon-14 method of dating.

**1961** Finds confirm the Vikings reached America.



1873 >>> 1880 >>> 1949 >>> 1961 >>>

**A**t the Gokstad farm in Norway's Vestfold region, a story had been passed down for generations. It claimed that a chieftain was buried under a mound near the farm. On a bitterly cold day, just after New Year 1880, curiosity got the better of a couple of the landowner's sons, who climbed the mound armed with shovels. The ground was frozen, but they managed to dig a hole in the hard surface. Before long the pair came across a piece of wood. It turned out to be the prow of a ship.

Soon, archaeologists arrived, painstakingly combing the mighty mound. Led by Norway's foremost archaeologist, Nicolay Nicolaysen, they uncovered an unprecedented find. The mound turned out to hide the well-preserved skeleton of an adult man, carefully laid out on a bed. The man was surrounded by burial treasures that, despite previous grave robberies, still included kitchen utensils, game pieces made from horn, harnesses, and gilt bronze bridles, as well as the skeletons of 12 horses, six dogs and, strangely, a peacock. But even more spectacularly, the deceased's bed lay in the middle of a huge oak ship that the clay soil had sealed and preserved for over a thousand years.

#### BURIED MAN WAS OF HIGH RANK

The archaeologists' eyes widened – not only did the clinker-built ship measure a whopping 23.8 metres in length, but it also appeared far more refined and sophisticated than anyone had imagined Viking ships to

be. There was a mechanism designed to close the oars' 32 rowlocks in heavy weather while another implement ensured that the Vikings could raise the rudder when they entered shallow water. The Gokstad ship was so well preserved that Nicolaysen was able to study both its cargo and construction, and in 1882, he published a book about the high-ranking man's vessel. Thus, the concept of a Viking ship was born.

Fascination with Viking shipbuilding led Norwegian boatbuilders to undertake a reconstruction of the Gokstad ship, which, when finished, would represent Norway at the Chicago World's Fair.

#### Icelandic

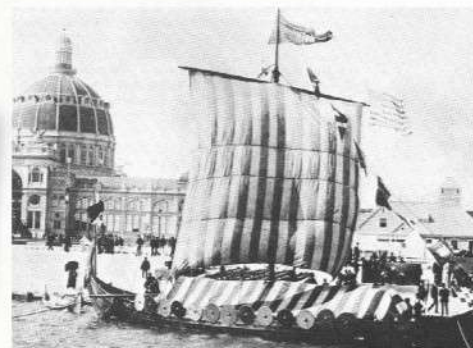
sagas, sources of the Old Norse world of gods, were preserved in churches through the Middle Ages.

Norwegian captain Magnus Andersen took charge of the longship, christened *Viking*, on its voyage across the Atlantic. To be on the safe side, the shipbuilders fitted *Viking* with a modern rudder in the middle of her stern, but the crew managed to cross the ocean using a rudder similar to the Gokstad ship's original and without using the oars.

Many had previously thought that ancient ships were clumsy and slow, but *Viking* made the 3,900-mile journey from Bergen to Newfoundland in just 27 days, attaining speeds of up to 12 knots (around 22 km/h). At the same time, the sailors were given a glimpse into life on a month-long ocean voyage in an open Viking ship. Among other things, Captain Andersen noted that the ship's flexible hull didn't get tossed around in the waves but ploughed steadily through the water, even in rough seas.

#### VIKING'S CREW ARRESTED

In the early hours of 19th June 1893, Captain Andersen and his crew were arrested on the



In 1893, the ship *Viking*, a reconstruction of the Gokstad ship, arrived in North America for the Chicago World's Fair.

streets of New York for drunken and disorderly behaviour. Soon after, the *Viking's* sailors found themselves in a dark cell at the Hamilton Avenue police station.

"These fellows think they own the country. They have been doing as they please in New York, and they came over to take a slice of Brooklyn," mocked the judge who took the Norwegians' case.

But when the mayor of the town heard about their arrest, he rushed to the aid of the sailors and had them released. They may have been misbehaving (in fact, they'd been set upon by locals), but *Viking's* crew had arrived in New York as the mayor's guests of honour, and shortly after their release were able to attend a reception at City Hall, where the Norwegian flag flew alongside the Stars and Stripes.

The judge's remarks reflected the fact that even in the late 19th century, Vikings had a reputation as brutal, cruel and drunken barbarians. Yet it was also around this time that archaeology was evolving as a science to provide opportunities to amend this anachronistic image of Viking-Age peoples.

#### VIKING AGE CAME INTO BEING

Until 1873, historians did not consider the Viking Age to be a historical era in its own right. For them, it was simply part of the last phase of the Iron Age. Only when Danish archaeologist and historian Jens Jacob Asmussen Worsaae published a work on the 800-1066 period did the term Viking Age come into use. Worsaae devoted his life to promoting archaeology as the best way to investigate prehistory.

Worsaae's book was published at a time when the entire Western world's view of man and the world was changing. Fourteen years earlier, the English naturalist Charles Darwin had published his work *On The Origin of Species*, in which he'd presented his theory of evolution based on studies on life on the Galapagos Islands. His zealous and investigative working methods spread to all the sciences.

In historiography, the usual praise of God and king was replaced by attempts to show "how it essentially was", as the German

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At the time of its excavation in 1880, the Gokstad ship had been looted by grave robbers, but still contained great archaeological treasures.

TECHNOLOGY

CULTURE

ECONOMY

DAILY LIFE

### Opera gave the Vikings horns

Viking warriors are often depicted as bearded with horns on their helmets. But Viking helmets were not decorated with horns, archaeological finds show. Helmets with horns, on the other hand, date back to the early Bronze Age, around 1000 BC. The idea of Vikings with horns may have originated in Richard Wagner's opera *The Ring of the Nibelung*, where the actors' helmets were designed with horns – inspired by medieval coats of arms.





“ But even more spectacularly,  
the deceased’s bed lay in the  
middle of a huge oak ship ”





## DENDROCHRONOLOGY – TREE RINGS REVEAL DATES

By examining the wooden planks of Viking ships, researchers can date the vessels based on their tree rings. Despite modern technological dating methods, dendrochronology remains the archaeologist's most accurate tool and can be applied to timbers up to 10,000 years old.



**ANNUAL RINGS:** The rings' thickness are measured on a cross-section. The rings create a kind of fingerprint, which can be compared with an archive of measurements from other trees.



**BARK RING:** If the last ring, which lies just under the bark, has finished forming, the tree was cut down in winter. If not, it was felled during the growing season..

historian Leopold von Ranke put it. Research into the Viking Age had hitherto been based on written sources – typically sagas written centuries later or unreliable accounts from terrified monks whose monasteries had been plundered by the Scandinavian warriors. The Norse's own rune stones often left only cursory information. Against this backdrop, the Vikings appeared to be a bunch of bloodthirsty savages on a perpetual rampage.

But with the rise of modern archaeology in the 19th century, which drew its conclusions about the past from physical findings, the image of the warrior Viking cracked. Not only did it turn out that the Norse of the past had been eminent shipbuilders and seafarers, but they had also been skilled craftsmen, industrious farmers and enterprising merchants.

### GOKSTAD SHIP SPARKED INTEREST

Interest in Viking life was really sparked by the discovery of the Gokstad ship in the burial mound. Archaeologists examined the skeleton's bones and teeth for wear and tear and concluded that this high-ranking man died of old age and arthritis. The findings prompted Norwegian archaeologist Anton Wilhelm Brøgger in 1916 to identify him as Olaf Gudrødsson, a semi-mythological petty



The 19th-century romantic nationalists were passionate about Nordic antiquity. Here, people from the Swedish upper class dress as Vikings in 1869.



king who, according to the *Ynglinga saga*, was born as a “branch of Odin’s stem”, ruled as a strong king and finally died as an old man in his bed from “cruel gout”. Gudrødsson of Gokstad Mound was subsequently proclaimed a national hero in Norway, which had only gained independence from Sweden 11 years earlier.

#### ROMANTIC FORGED RUNES

After the discovery of the Gokstad Mound, Nicolay Nicolaysen and other archaeologists continued their excavations of the Viking world. Their discoveries and new knowledge of the Norse of the Viking Age came in handy for the ardent national romantics of the 19th century, who made heroes of their Nordic ancestors.

In Denmark, the priest and poet Nikolai Frederik Severin Grundtvig fought passionately for ordinary people to learn about their Old Norse roots. He published tales from Norse mythology – including *The Wolf’s Prophecy* about the creation of the world – and brought Viking legendary figures to life through his poetry.

Enthusiasm also spread to the Viking Age’s overseas colonies, and soon there was

no ancient find that hadn’t been associated with the brave Norsemen. When archaeologists unearthed an old wooden ship at the mouth of the River Usk in Wales, they immediately – but erroneously –

**4,000 kg**

of animal bones from the Viking Age were found during the excavation of Viking York.

claimed it came from Danish Vikings. In 1899, a Swedish immigrant from Kensington, Minnesota, went so far as to get out a hammer and chisel and painstakingly carve runes into a stone, later presenting the stone as a genuine sensation. Although experts quickly exposed the hoax, Viking enthusiasts battled for

years to prove the Kensington Runestone was genuine.

#### WARRIOR TURNED MERCHANT

*The Anglo-Saxon Chronicles* had described how Scandinavian Vikings plundered and ravaged the British Isles for centuries, but 19th-century archaeological discoveries painted a new and surprising picture of daily Viking life. Excavations of wooden barrels made from Norway spruce for freight along with glass from the Rhine area provided evidence of a steady stream of foreign traders into Hedeby. During the 1970s, excavations of Coppergate in Viking York revealed scales,

plumb bobs and other trading implements – the first evidence showing how trading was as much a part of Viking life as plundering.

In addition, the archaeologists in York and Hedeby found postholes of houses that had formed the framework of homes with fireplaces and weavers’ tools. In the remains of a shoemaker’s workshop, the soil had preserved scraps of leather and parts of at least ten different kinds of shoe moulds. Lice combs indicated that the Vikings had not only fought fierce enemies, but also tackled vermin in the home. And gradually, a picture emerged that the Vikings had been explorers as well as merchants, artists and, of course, warriors.

#### VIKINGS MADE A GLOBAL IMPACT

Viking seafaring skills were reinforced when Norwegian archaeologists Helge and Anne Stine Ingstad found evidence of Viking settlements in Newfoundland, North America in the 1960s, including – crucially – a bronze fastening pin, characteristic of Norse craftsmanship. It proved the Vikings had crossed the Atlantic some five hundred years before Christopher Columbus.

At the same time as the Ingstads were excavating in North America, Danish archaeologists came across another treasure >>>>



The Anglo-Saxon Chronicle portrayed the Vikings as a bloodthirsty race – a reputation that lasted for a millennium.



**CARBON 14:**

Skeletons, wooden fragments from workshops and bone remains from households were dated using the carbon-14 method when, from 1976 to 1981, archaeologists excavated the Vikings' busy craft workshops in Jorvik (now York). The clay's composition preserved even organic remains from Viking daily life. The carbon-14 method can date organic materials by measuring the amount of radioactive carbon-14 left in them.



in the fjord near the old royal town of Roskilde. Fishermen in the waters off the village of Skuldelev had long taken extra care with their nets because of a wreck there that they believed came from a ship belonging to the medieval queen Margaret I. When archaeologists investigated the fjord in 1962, they discovered that the bottom hid not just one, but five Viking ships, all of which had been built in the 11th century. Roskilde's Vikings had sunk the ships to defend the entrance to the city as enemy warships approached. The discoveries provided archaeologists and museum staff with new knowledge about the construction of these huge longships, such as the 30-metre *Skuldelev II*.

However, the finds also raised new questions. In particular, scholars struggled to link archaeological finds to people or events mentioned in sagas and on rune stones. At this point, modern dating methods came to the rescue.

**TREE RINGS****DETERMINED SHIP'S AGE**

Before 1900, archaeologists determined the age of an object by its appearance. However, this primitive dating method was extremely subjective, and even experienced archaeologists were often out by several hundred years.

But in the early 1900s, US astronomer Andrew Ellicott Douglass developed a

method called dendrochronology for dating wooden finds. Douglass knew that all trees have annual rings that show the age of the tree. The thickness of the tree rings varies over time, with the thickness of each ring dating trees to specific years, from hot, dry summers such as in 1156 to cold, wet ones like that in 1245. Douglass created an archive of tree-ring thickness, allowing him to link two ship finds if the tree rings of the planks had the same pattern. Over the years, the archive has become so extensive that archaeologists can now date finds precisely simply by examining the tree rings.

Dendrochronology can also reveal where a tree came from, because each area has its own growth pattern. Scholars could therefore accurately conclude that the oak tree for *Skuldelev II* was felled near present-day Dublin in the autumn of 1042.

Between 2000 and 2004, museum workers built the

*Sea Stallion from Glendalough*, a faithful replica of the longship that they sailed to Ireland several times.

**DATING TECH REWROTE HISTORY**

Dendrochronology has also helped to correct historiography. For example, legend

claimed that the *Danevirke* (Danework) earthworks, which formed the Danish Vikings' southern defences, was built by Gorm the Old's queen, Thyra Danebod, in the middle of the tenth century. However, studies of the timber rings showed that the Vikings had begun building the wooden structure of the rampart as early as 730.

"Strontium isotope analysis has revealed that Harald Bluetooth hired foreign mercenaries."

As a result of research into atomic technology during World War II, another dating method revolutionised archaeologists' work between 1947 and 1951, when US chemist Willard Frank Libby developed the carbon-14 method. This approach based on the idea that all living organisms absorb a small amount of the

slightly radioactive carbon-14 from the atmosphere during their lifetime.

When a human, animal or other living organism dies, the intake of carbon-14 stops and is eventually converted to nitrogen by radioactive decay. Scientists know that the amount of carbon-14 halves over 5,730 years. By measuring how much carbon-14 a bone contains, for example, and then comparing that to the amount a bone normally absorbs over a lifetime, Libby was able to determine the age of an archaeological find to within around one hundred years.

Like dendrochronology, carbon-14 analyses have helped to confirm old theories as well as debunk myths in historical science. For example, carbon-14 studies from the Viking settlement at L'Anse aux Meadows in America show that the Norse did arrive around the turn of



Some people still claim the forged runes on the Kensington Stone are real.





**DNA:** DNA analysis of, for example, teeth from this skull in Denmark reveals Viking ancestry, genetic diseases and family traits. Because of the high risk of contaminating the skeletons with the researchers' own DNA, they don gloves and full suits.



**STRONTIUM:** The substance, which is absorbed by teeth and bones through food and drink, varies from place to place and therefore shows where a person comes from. For example, archaeologists used it to establish that Harald Bluetooth brought the men buried around Trelleborg from outside Denmark to serve as housecarls.

the millennium in 1000, exactly as claimed in the sagas.

#### TEETH REVEALED DOMESTIC LIFE

In recent years, technology has given archaeologists new methods that make it possible to get even closer to the history of individual Vikings.

For example, trontium isotope analysis of teeth can tell us where their owner came from. With this method, scientists measure how much of the element strontium, which humans absorb from food and drink, is in the tooth's enamel. The amount that gets deposited varies in different parts of the world, therefore revealing the person's origin. As tooth enamel remains largely unchanged from childhood, it can tell us where a person was born. In contrast, the strontium content deposited in bones, which changes throughout life, indicates where a person lived in their final years, giving archaeologists the tools to pinpoint where a person started and ended their life.

Strontium isotope analysis has revealed that Harald Bluetooth hired foreign mercenaries to guard his ring fortresses. Thirty out of 48 skeletons examined from Trelleborg came from outside Denmark, including some from present-day Poland. Historians believe this was because the king found it easier to find loyal housecarls (bodyguards) outside his own territory.

Combined with DNA analysis, strontium has also helped to map Norse settlements in the British Isles, including Norwegian immigration to Scotland, Shetland and Orkney. DNA studies of the Y chromosome in Orkney's male population reveal that

more than half have Viking blood in their veins, for example.

#### KNOWLEDGE UNCOVERS NEW PUZZLES

Modern dating methods and new techniques have prompted archaeologists to re-examine ancient finds in the laboratory, including the dead man from the Gokstad Mound, whom archaeologists believed was Olaf Gudrødsson.

After the excavation in 1880 and subsequent examination, the remains of the magnate were laid to rest again in the burial mound in a grand ceremony in 1929. King Haakon VII, several ministers and thousands of people attended the funeral, where the king addressed the crowd. The skeleton was placed in a lead sarcophagus and reburied, but as the years passed, archaeologists began to fear that the bones were not well-preserved and might decay. When they dug up his bones

again in 2007, it turned out they were just in time; moisture within the sarcophagus was damaging the skeleton.

Fortunately, the bones were still sufficiently intact for archaeologists to examine them in the lab. However, their own discoveries weren't down to modern technology and analysis – it was simply that the scientists spotted clear marks from weapon strikes. Most likely, a fatal blow had left the deep cut they found on the inside of the right thighbone, right where the main artery runs. It meant the deceased could not have been King Olaf Gudrødsson of the sagas, who had died of old age in his bed.

The scientists were unable to identify who the prominent individual actually was, so while scholars are constantly discovering new things, the man's identity remains one of the unsolved mysteries of the Viking Age – at least for now. ■

#### TECHNOLOGY



#### CULTURE

#### ECONOMY

#### DAILY LIFE

### Archaeologists get help from above

Since the early 1900s, aerial photography has helped archaeologists find traces of houses, settlements and burial mounds. For example, grey patches of mouldy wood on the ground surface can reveal postholes from Viking

longhouses. With aerial or satellite images taken at different frequencies – waves of light fluctuating at different rates – scientists can reveal the chemistry of the earth more clearly, revealing things that are invisible to the naked eye.



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# The Viking Empire

When Harald Hardrada took an arrow to the throat near York in 1066, it signalled the end of the Viking Age. Chronicles of the time recorded how the Norse warriors had raped, pillaged and looted their way through Europe for three centuries. For long years, these ancient texts were our best source of knowledge about the Viking era. But archaeological finds and studies have since painted a more nuanced picture. Thousands of young men may have set out on raids, and powerful chieftains undoubtedly subdued vast areas of land, but the Vikings were first and foremost traders. Their sleek ships ruled the world's oceans, and trading towns sprang up in Scandinavia, where merchants sold goods from all over the known world. The quest for land and luxury drove the Norse further east and west, until they had charted the rivers of what is now Russia and landed on the vast continent we would one day come to know as America.

Dramatic narrative pulls you in

Vivid illustrations help bring the past to life

Beautiful maps give an overview of the story